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Drug & Cosmetic INDUSTRY

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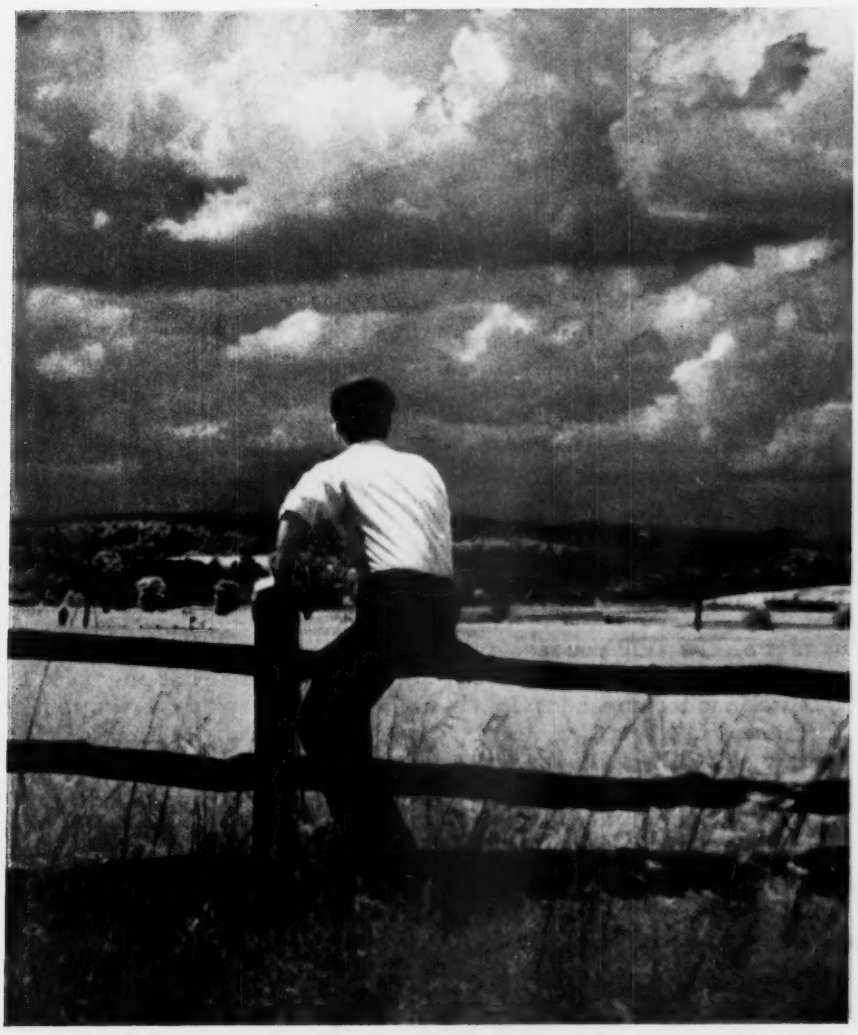

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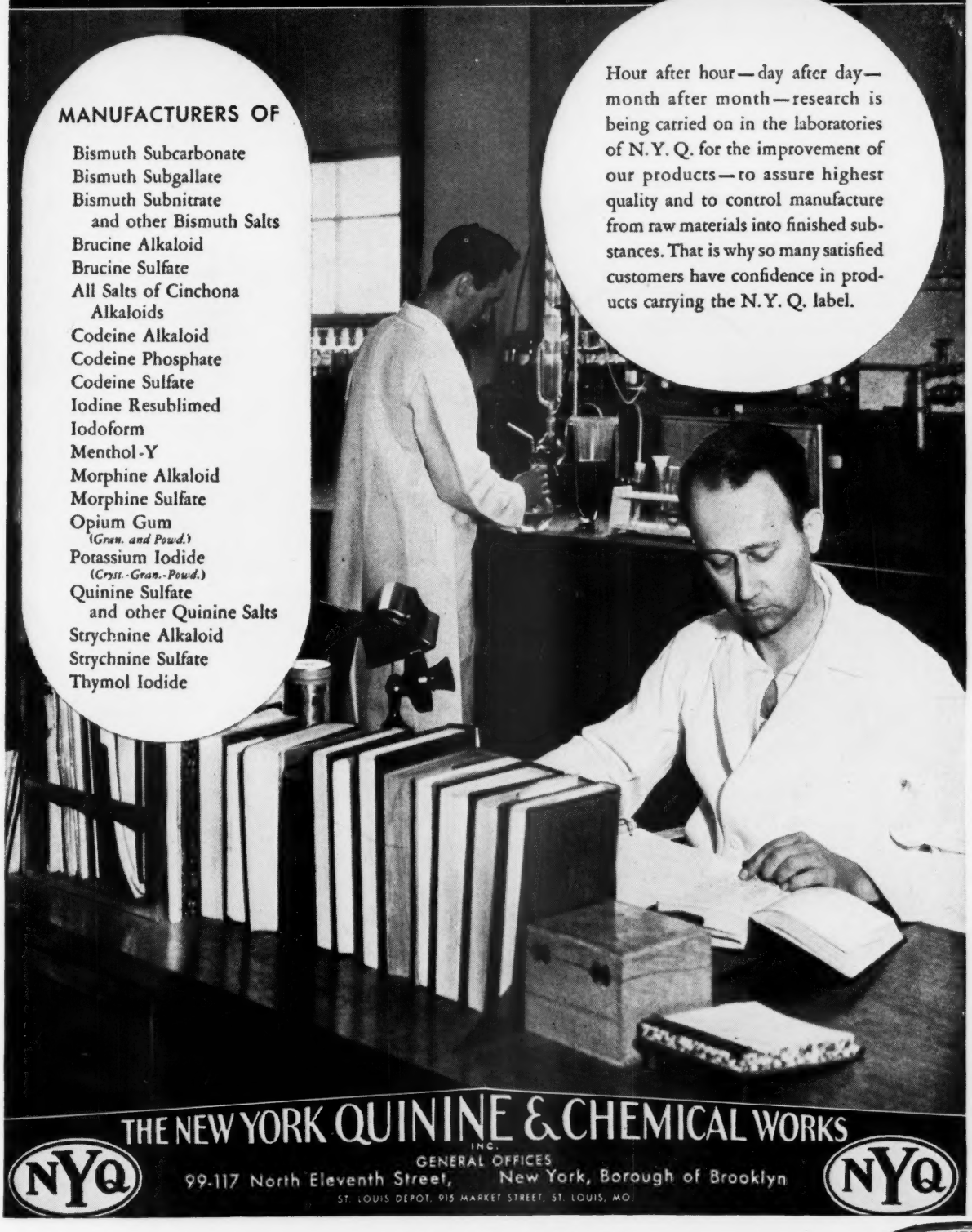

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Drug & Cosmetic INDUSTRY

JANUARY 1941

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Evans Chemetics, Inc.
33 West 46th Street, New York
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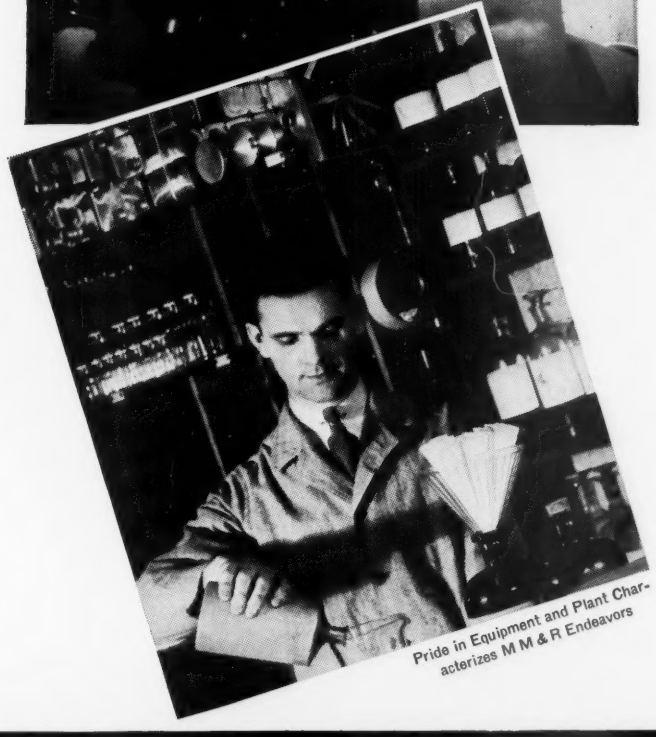

Pride in Equipment and Plant Characterizes M M & R Endeavors

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. . . "Cosmetic Trends" is published primarily in the interest of ALLIED clients as further evidence of our sincere desire to serve them not only in the production of cosmetics worthy of bearing their names . . . but, in extending their markets and profit opportunities, as well.

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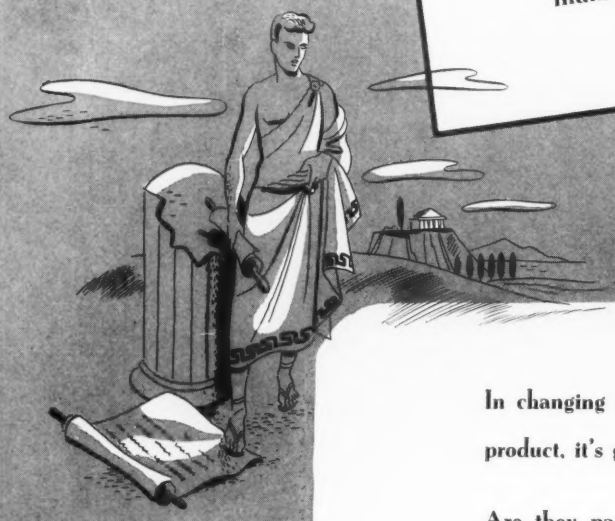
DEMOSTHENES



In changing your present package, or in designing a container for a new product, it's good sense to study what your competitors have done.

Are they paying your package the same compliment? Or are both your competitors and your customers passing your product by because of an archaic design?

The answer to this problem lies in consulting designers who specialize in anticipating the market. Our design engineers, for instance, are in close touch with the latest package trends. They will be glad to plan a glass package for your product, whether it be a food, drug, cosmetic or household specialty, that will stamp it as a leader in any competition.

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Point "2" of "3-point" service is well illustrated in these practicable bottles manufactured for Abbott Laboratories. Neither (1) Beauty nor (3) Economy is overlooked, however. These bottles were produced by us from the packager's design.

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AROMATICS

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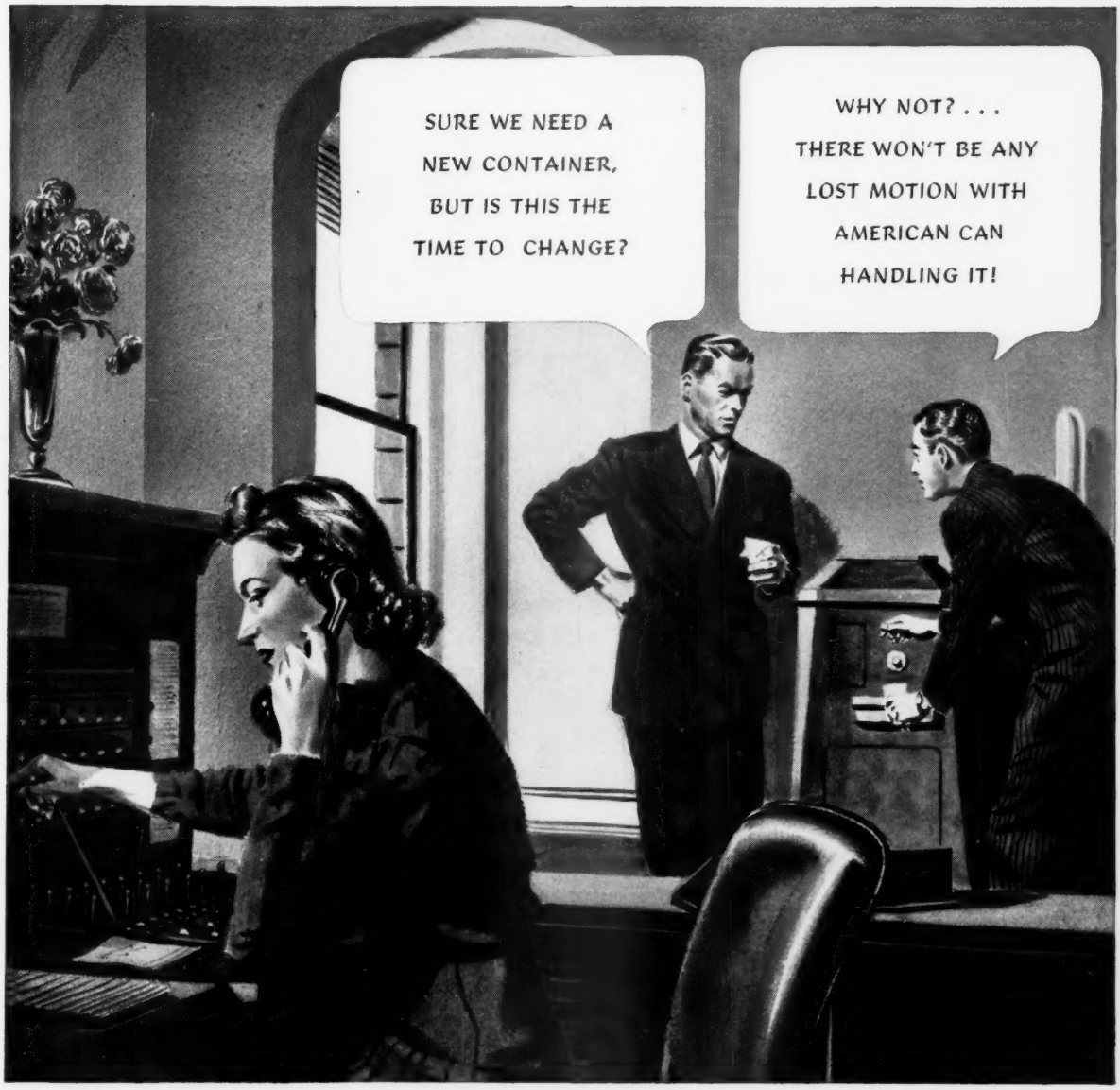
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WHY NOT? . . . THERE WON'T BE ANY LOST MOTION WITH AMERICAN CAN HANDLING IT!

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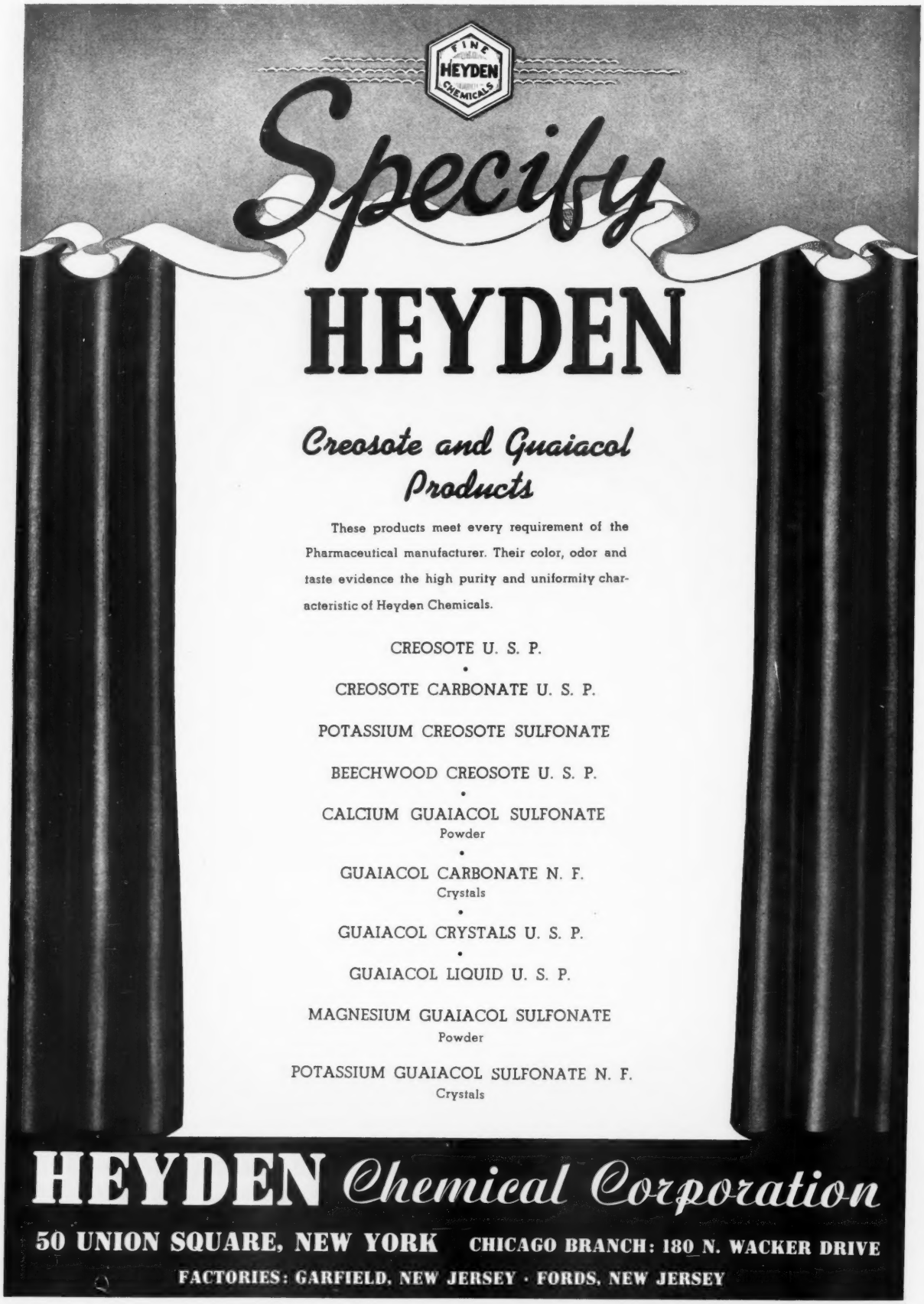

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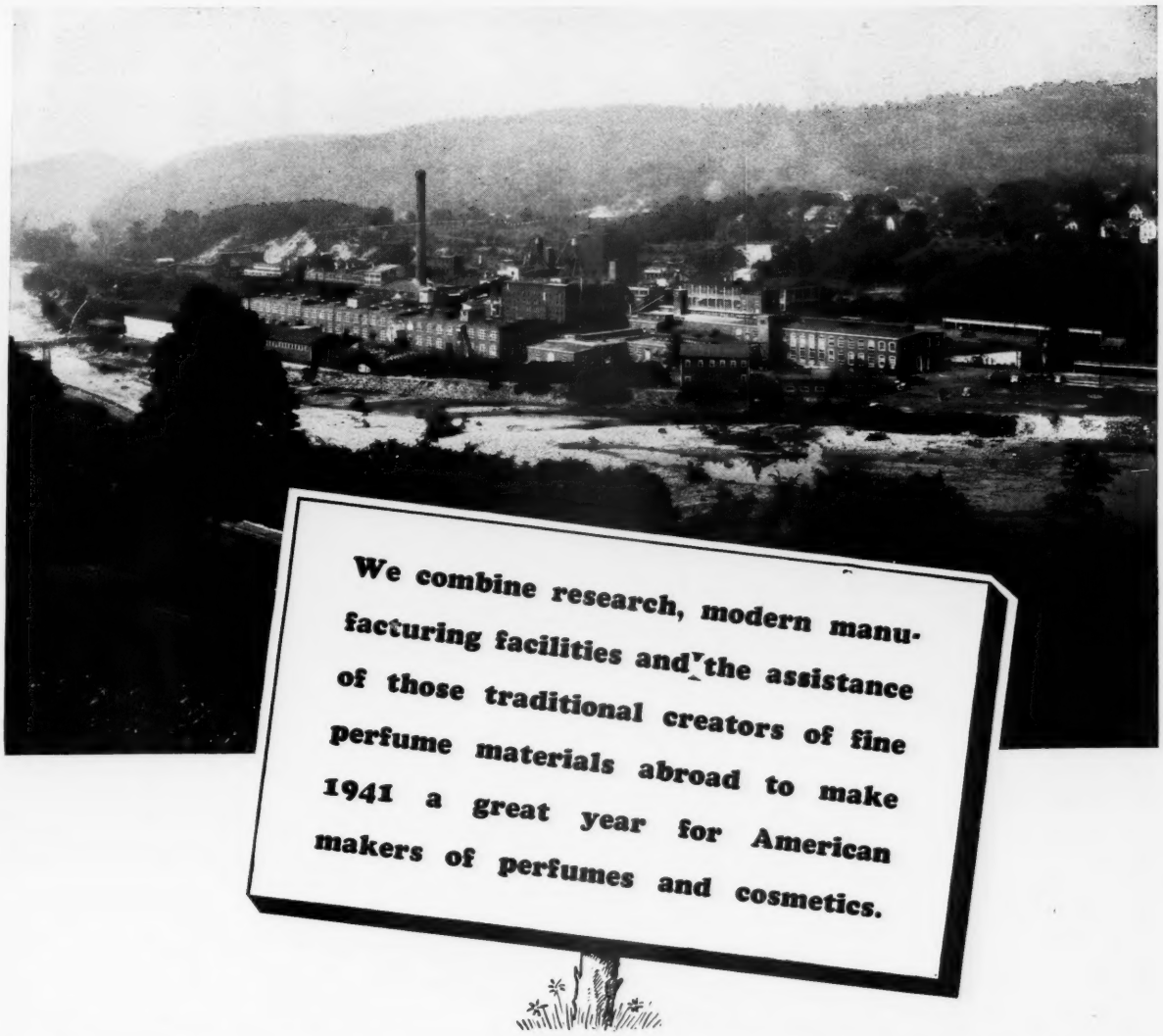
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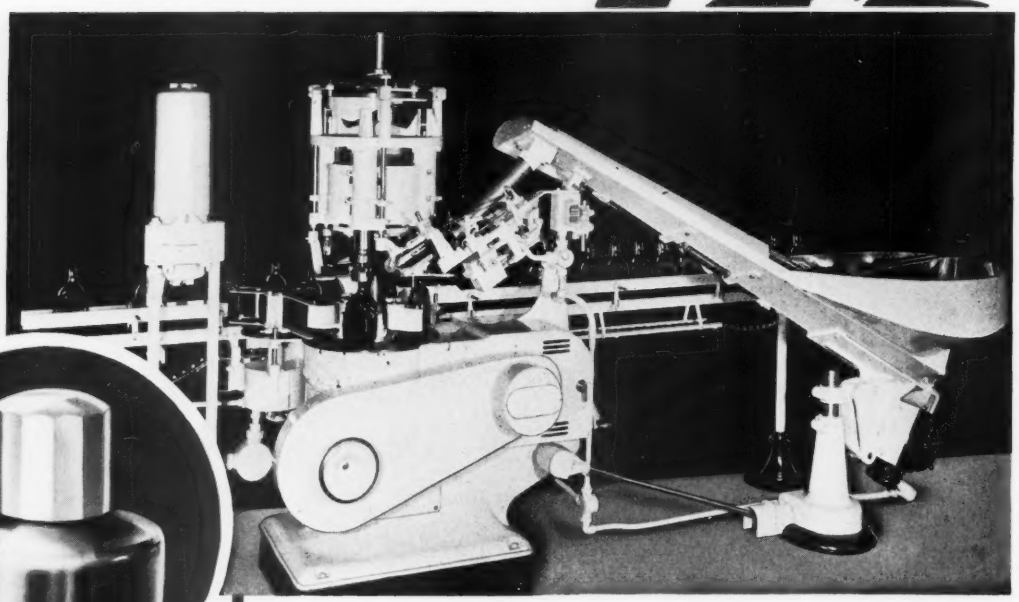
PACK TO ATTRACT IN

MARYLAND BLUE

You'll doff your hat

TO THIS NEW CAPPING METHOD



This new Cap Feed has been designed for use on all of Pneumatic's Automatic Capping Machines—either the Single-Head, Two-Head or Four-Head Units.

Handles High Caps — Delicate Closures Individually, Automatically

THE TRADE CALLED FOR IT—PNEUMATIC RESPONDS with an entirely new cap feeding principle that will greatly reduce production expense for those who use bottle closures which heretofore required special, costly methods of handling. Long skirt moulded plastic caps for bar service liquor bottles, tall caps for cosmetic containers, metal service caps for catsup and sauce bottles, and many styles of caps too fragile or delicately finished for ordinary machine handling are only a few of the types of closures for which this new Cap Feed is applicable.

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***CAP MANUFACTURERS!**

Pneumatic's new Cap Feed may be used as a separate unit for automatically sorting and conveying caps to Cap Lining Machines. Designed primarily for deep skirted caps, however it will handle all standard shallow caps as well. Amazingly high speeds are entirely practical. (We'll gladly send you further particulars).

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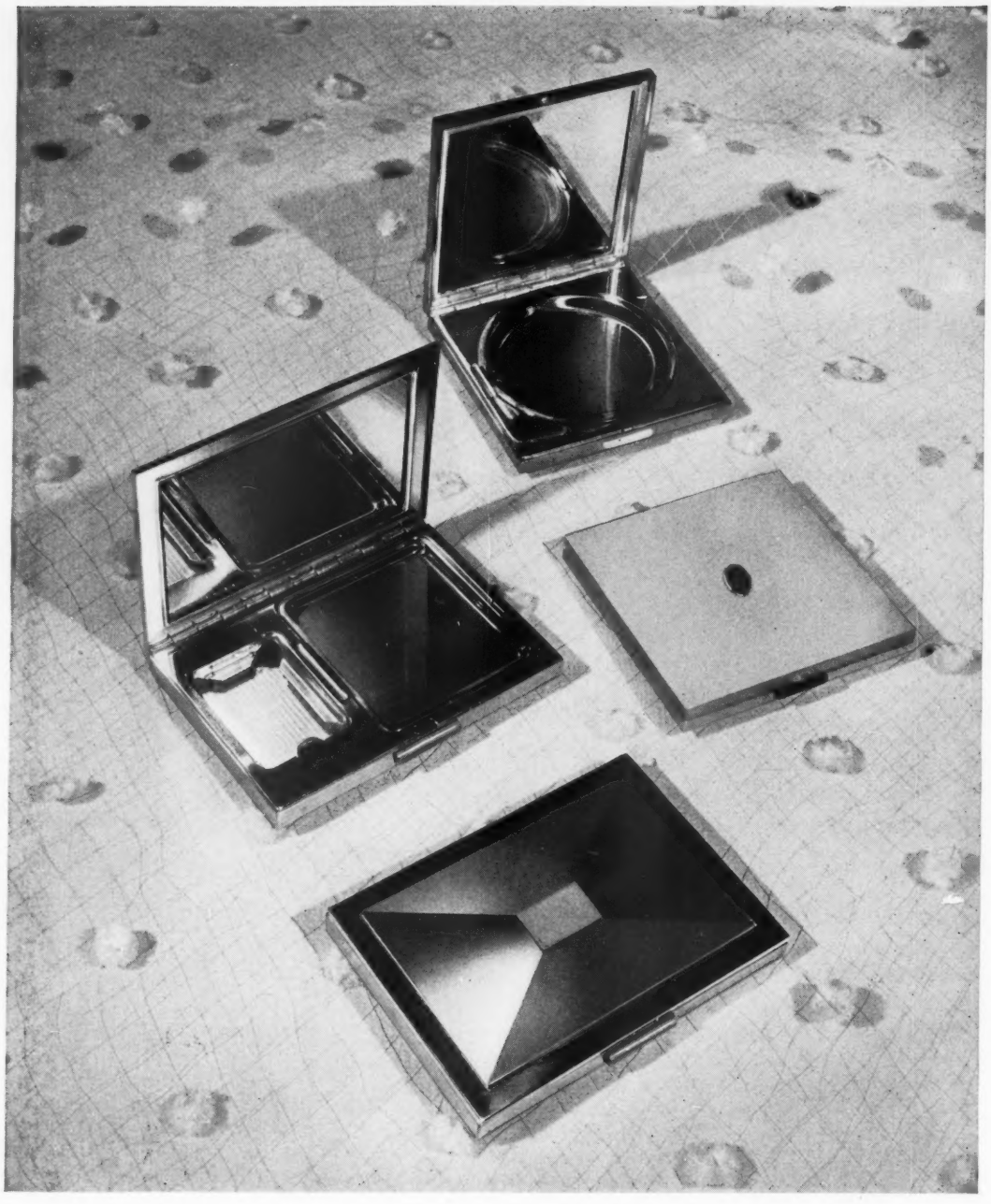

Vanities BY BRIDGEPORT

Bridgeport compact cases and vanities are outstanding for style and craftsmanship. Vanities such as these can be produced to specification to harmonize with any cosmetic line or color scheme. . . . . .

BRIDGEPORT METAL GOODS MFG. CO.

BRIDGEPORT, CONN. Phone Bridgeport 3-3125 ESTABLISHED 1909

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Synthetic "Schimmel & Co."

$46.00 per lb.

This faithful reproduction of the blossoms of southern France is the result of research over a long series of years, during which the aromatic constituents were brought to light one by one. Today Orange Flowers "Schimmel & Co." is the complete substitute for the natural extract, replacing it at a great saving to the user.

Orange Flowers

Synthetic, terpeneless, "Schimmel & Co."

$60.00 per lb.

This product contains all the aromatic qualities of Orange Flower oil, added to which it has the advantage of greatly increased solubility, due to the removal of terpenes. It is ideal for use in creams and lotions of low alcoholic content.

Schimmel & Co., Inc.

601 West Twenty-sixth Street

New York New York

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MINNEAPOLIS NEW ORLEANS ST. LOUIS

For "DEMAND" Hair Preparations

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Consumer acceptance of cosmetic preparations depends in large part on quality, uniformity, and reliability. There is no better way to ensure the incorporation of these basic properties in your preparations than by the use of these Merck Products for Cosmetic Use:

Benzoic Acid — **Citric Acid**
Sodium Benzoate — **Lead Acetate**
Salicylic Acid — **Sulfur**
Butoben (n-Butyl Parahydroxybenzoate Merck)
Paraphenylenediamine
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Pyrogallol — **Resorcin Monoacetate**
Resorcin — **Silver Nitrate**
Silver Sulfate and other Silver Salts
Sodium Sulfite
Aluminum Chloride — **Ammonium Carbonate**
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Hydratropic Aldehyde A Hyacinth aroma.

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Product Gl-4C A non-toxic wetting agent and detergent with excellent foaming qualities for liquid dentifrices, soapless shampoos, brushless shaving creams, etc.

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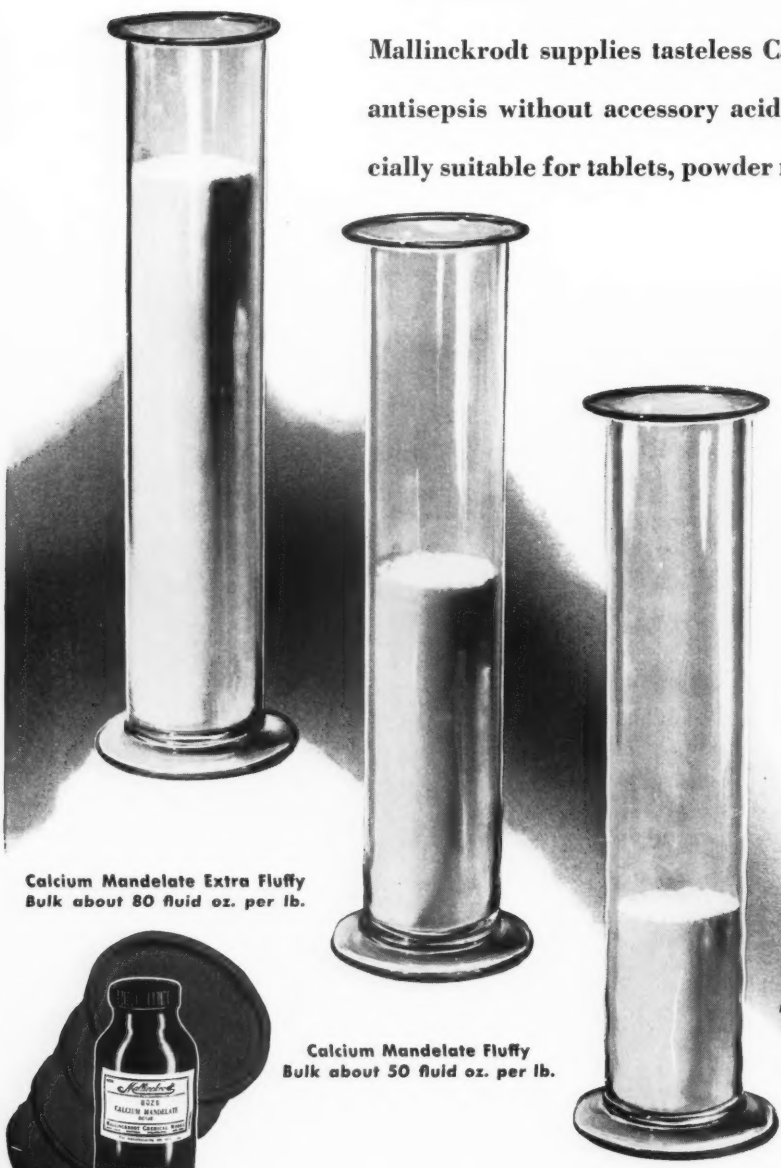

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AN OPPORTUNITY

THIS industry can make 1941 a year of outstanding achievement. The demand for research, inventive ingenuity, and general business expansion will be greater this year than in any period during the last twenty-four years. But this year should not be simply a year of growing business and larger profits. That would not be an achievement in 1941.

OUR chemical and aromatic industry is already making great technical strides which will benefit these companies for many years to come. New opportunities for new products, new markets, and better processes are being presented daily.

OUR equipment and package industry will have equal opportunities. Increasing production must result in many demands for more efficient equipment, as well as in wider employment of automatic machinery, and demands for an increase in container research to meet the technical problems of volume packaging.

PHARMACEUTICAL and cosmetic manufacturers see a widening horizon opening new vistas of expanding business. This is visible not only in our domestic market and defense program, but also in our expanding South American trade.

AMERICA can emerge from this period as the world leader in the products of our industry. Never in our history have conditions so completely favored this opportunity. But leadership implies much more than doing a flourishing business during the next few years. It means keeping an objective everlastingly in mind during this period and working toward that objective by investment in research, in the kind of plant equipment that cannot be equalled elsewhere in the world, by sound merchandising and advertising policies, and above all, by progressive technical achievements that will turn the eyes of the world to this industry.

LET us use some of the energy and the profits of these years for investment in American achievement. That this will pay dividends in the domestic market for years to come no one can doubt; that it will give to the American manufacturer of drugs and cosmetics, with all their allied products, a world preeminence is a stirring probability worth working and fighting for.

THE STABILITY OF PERFUME COMPOSITION

Of all the materials which the perfumer and cosmetic manufacturer has had to buy during the past eighteen months of war and blockade, the perfume compound has been his greatest source of worry. And yet a careful survey of many companies buying and selling perfume compounds has failed to reveal one single case where this worry has yet been fully justified.

This disturbed mental state of the trade is easily understood. More than any other one thing in a cosmetic line, the odor which identifies this line and often is a basic cause of its public acceptance and popularity, can hardly be changed perceptibly without risk and without costly and laborious sales and advertising preparation. In perfumes, colognes and toilet waters, the odor is, of course, the single controlling factor of sustained success.

With this conviction clearly in mind, the perfumer and cosmetic manufacturer has listened with growing discomfort to reported effects of invasion, blockade and other disorganizing influences affecting the normal flow of perfume materials to this country.

This is a world business, as the industry well knows. Scarcely any country in the world can be cut off from communication with us without affecting in some way our perfume economy and some of our perfume formulas. Some of our most essential materials, at least for the more expensive perfumes, come from places rather inaccessible, even under normal and favorable conditions. How easily then can this complicated chain of barter and transportation which finally brings such products as civet and musk to our American perfumer be interrupted or severed.

Fortunately or unfortunately as the case may be, certain few favored areas contribute the primary essentials this industry must have. They are not many in number, largely because of the notable growth and achievement of the aromatic chemical industry since the last war. But they are essential and it is the firm conviction of every perfumer that a fine perfume cannot be compounded without at least a small percentage of the select flower oils and natural products. And to these aristocrats of the perfume material world, surrounded with so much uncertainty, as jasmine, oak moss, rose, civet, musk, etc., must be added those imported essential oils necessary not only for the manufacture of aromatic derivatives but others which play an important part in perfume formulation.

Some day a great romance will be written. It will be the story of the valiant effort of importers of perfume materials to overcome the obstacles of war-ridden economy, blockade, a shortage of shipping, financial tangles and many other heart-breaking hazards, to bring here those essential materials we need from abroad. Certainly without the courage, the daring, and the ingenuity that have been shown in some few cases, the situation facing our perfumers would have been far more serious. This is not to say that all cosmetic manufacturers can serenely face the future without fear of some adjustments. Undoubtedly, some change in formulas will have to come, if the conditions we face at present continue or get worse. But it is a tribute to importers that things have not been much worse.

Nobody could have foreseen the debacle of the last eighteen months or have anticipated the great demand on importers and branch houses here. Inventories of many of these farsighted houses were unusually high eighteen months ago. But then several new factors affecting consumption to a great extent appeared. Domestic consumption of perfumes and cosmetics increased. Many houses formerly buying in Paris entered the American markets, not only for production here, but for the export business formerly handled from abroad. Our own export, especially to South America, of perfumes and cosmetics as well as of perfume materials and compounds, materially increased. And many perfume manufacturers have been buying heavily with both future inflation and future material security in mind.

We said at the beginning that no company purchasing compounds has yet had cause to justify any real worry. We mean by this that there has been a really remarkable record by the compound houses in meeting this

The problem of perfumes for all cosmetic preparations is one that is foremost in the minds of manufacturers in this industry. This article explains quite completely the true situation, and indicates just how much worry over perfumes is justified.

emergency, in helping in the relatively few cases so far where perfume formulas need adjusting, either because of price or threat of scarcity of any material contained in it, and in minimizing price increases in the face of greatly increased cost of certain perfume material replacements. The criticism which some cosmetic manufacturers have directed in the past against the purchase of a perfume compound, as compared with their own formulation, i.e. lack of security, has certainly not been justified.

The perfume compound has been defined as a blended product of perfume materials, so blended to produce a desired odor at a particular price for a particular purpose. It may contain any or all of the following perfume materials, depending on the odor desired, the price and the purpose:

1. Absolute Flower Oils
2. Essential Oils
3. Aromatic Chemicals
4. Aromatic Derivatives
5. Animal Products
6. Oleo Resins
7. Perfume specialties, and such compounds as bases, artificial flower odors, etc.

Low cost compounds, largely used outside this industry and for industrial purposes, are primarily mixtures of low priced aromatic chemicals which may include aromatic by-products and low priced essential oils. Compositions of this sort are practically free of foreign influences, and can be adjusted with moderate ease for complete domestic security.

Medium priced compounds, largely intended for low priced toilet waters and cosmetics, are primarily compositions of aromatic chemicals, essential oils and other compounds such as the artificial flower bases. This group too can be classed as relatively free from any trouble affecting foreign shipments. The secure position of our aromatic chemical industry, the remarkable ingenuity of the compound houses in developing artificial odors, all combine to make substitution relatively easy in this group in the few cases needed.

It is in the higher priced compounds—those used in the better perfumes, toilet waters and in cosmetics largely retailing for a dollar or over that the real problems have been encountered. Formula adjustment here is really a creative art, partly because these formulas are complex, containing several or all of the groups mentioned above and often including as many as thirty different perfume materials; partly because any change must meet the test of a critical retail trade and public.

Up to this time adjustments which have been made have been dictated largely by the considerable increase in cost of certain imported oils such as jasmine, rose, etc., or by a threatened shortage which has made some cosmetic manufacturers believe that the risk of adjustment of the formula would be less than the risk of continuing dependence on a few threatened materials.

It may be well to state here briefly the status of these groups.

1. Absolute Flower Oils—largely dependent on Grasse, France. All are imported and are essential for many of the higher priced perfumes. A serious or complete shortage only prevented by a remarkable exploit recently bringing a large shipment here. Probably enough for this spring. Future depending on war and chance.

2. Essential Oils—security depending on country of origin. Several which can hardly be replaced are from French colonies now blockaded.

3. Aromatic Chemicals—of coal tar origin. The great achievement of our own aromatic chemical industry in producing here an equal quality by an equally good process, the aromatic chemicals our industry requires, is a record this entire industry should recognize. In this group we can write down complete domestic security.

4. Aromatic Derivatives—these too are classed as aromatic chemicals. They are products made from essential oils, most of which are imported. Farsightedness in covering requirements for these raw materials seem to make this group also a secure source of supply.

But here again the status of the Dutch East Indies is an important controlling factor.

5 and 6. Animal Products and the materials for oleo resins are subject to the import qualifications covering essential oils, i.e. country of origin.

7. Perfume Specialties—These special trade-marked perfume creations are widely used particularly in the finer, more expensive odors. Some are made in America, some are imported. Here too the importers have shown great courage and ingenuity and adequate stocks are reported here.

For the present, at least, the primary problem facing the perfume and cosmetic manufacturer using compounds is the rise in the price of many perfume materials which must affect the price he pays for the finished compound. This rise in price is not of course the exclusive problem of the compound buyer—they affect every one purchasing and using perfume materials.

It should be said that to a considerable extent the compound user has had the advantage during this eighteen month period of hectic prices and supplies of certain vital materials. The compound sellers have shown a definite sense of responsibility toward their customers. This policy taking the form of primary protection in withholding for these compounds the perfume materials for which a shortage threatened, and in delayed price increases, has had a material effect in spreading throughout the industry a security in supplies and in ability to prosper during this Christmas season which would not otherwise have been so general.

In order to analyze more specifically the price situation of perfume materials, we publish the following tables. Below are three typical perfume formulas. They are elementary and are not meant to serve as odors which should be used by any reader. But they do illustrate the comparative rise in cost which has affected many perfume compounds.

Lavender Bouquet		*August 1939* Price	*August 1939* Value	*December 1940* Price	*December 1940* Value	
Oil Lavender 38/40 Ester	55	$ 3.50	$ 115.50	$ 7.00	$ 385.00	
Brazil Bois de Rose Oil	20	1.65	33.00	2.10	42.00	
Clary Sage	8	35.50	284.00	44.50	356.00	
Benzophenone	5	1.00	5.00	.90	4.50	
Methyl Hexyl Ketone	1	4.25	4.25	5.00	5.00	
Linalyl Acetate 90%	4	2.30	9.20	3.25	13.00	
Rose Absolute	2	67.00	134.00	180.00	360.00	
Rhodinol	5	12.50	62.50	25.00	125.00	
	100		$647.45		$1290.50	+ 99.1%
Eau de Cologne						
Oil Bergamot N. F.	20	4.40	88.00	15.00	300.00	
Oil Neroli Petale	5	50.00	250.00	185.00	925.00	
Oil Petitgrain Fr. Bigarade	4	9.00	36.00	13.00	52.00	
Oil Lemon Calif.	35	3.05	106.75	3.15	110.25	
Oil Orange Calif.	15	1.05	15.75	1.80	27.00	
Oil Lavender Fleurs	15	3.50	52.50	4.75	71.25	
Oil Verbena	2	4.10	8.20	6.25	12.50	
Tinct. Musk Tonquin	4	22.00	88.00	41.00	164.00	
	100		$645.20		$1662.00	+157.8%
Lilac						
Terpineol Extra	30	.40	12.00	.40	12.00	
Phenyl ethyl alcohol	15	2.25	33.75	2.25	33.75	
Iso Engenol	5	2.65	13.25	2.80	14.00	
Heliotropine	5	3.45	17.25	3.20	16.00	
Styrax	2	.65	1.30	.95	1.90	
Cinnamyl Alcohol	5	3.10	15.50	2.90	14.50	
Musk Ketone	6	3.90	23.40	3.90	23.40	
Jasmin Absolute	4	250.00	1000.00	500.00	2000.00	
Vanillin	3	2.65	7.95	2.65	7.95	
Hydroxycitronellal	20	2.45	49.00	2.45	49.00	
Linalool	5	2.45	12.25	3.70	18.50	
	100		$1185.65		$2191.00	+ 84.9%
						106.1%

In order to give a broader picture of perfume material prices, we have compiled a list of current prices at the beginning of the war eighteen months ago compared with the prices as of December 1940. Some of these current prices are difficult to obtain—the market is erratic and sensitive where certain imported naturals and essential oils are concerned. We have taken the average price for these products and publish these simply as a comparison with prewar price advances.

Perfume specialty prices are not an open market quotation. But since they figure so importantly in so many perfume compositions, we have averaged the advances given by manufacturers and importers of these products and find an average increase of less than 20 per cent.

Essential Oils, Flower Absolutes and Oleo Resins

Oil	*Limit Price Sept./39*	*Limit Price Dec./40*	*Spot Supply*
Balsam Tolu	$ .50 lb.	.90 lb.	Normal
Basil Reunion	4.00 lb.	7.50 lb.*	Very scarce
Bergamot	4.00 lb.	13.00 lb.*	Very scarce
Bois de Rose Brazil	1.50 lb.	2.00 lb.	Scarce
Camphor White Japanese	.30 lb.	.32 lb.*	Very scarce
Camphor Sassafrassy	.28 lb.	.25 lb.	Fair
Cananga Java Native	1.40 lb.	2.60 lb.*	Very scarce
Cardamom	20.00 lb.	16.00 lb.	Scarce
Chamomile			
Citronella Java	.40 lb.	.34 lb.	Normal
Citronella Ceylon	.45 lb.	.37 lb.	Normal
Clary Sage	12.50 lb.	16.00 lb.	Scarce
Cloves Zanzibar	1.55 lb.	1.15 lb.	Normal
Coriander	20.00 lb.	17.00 lb.	Fair
Estragon	33.00 lb.	45.00 lb.*	Very scarce
Galbanum Oleoresin	4.75 lb.	7.00 lb.*	Very scarce
Geranium Bourbon	3.00 lb.	13.00 lb.*	Very scarce
Geranium African	3.00 lb.	13.00 lb.*	Very scarce
Guaiac Wood Concrete	2.15 lb.	4.00 lb.*	Very scarce
Labdanum Spanish Oleoresin	8.15 lb.	14.00 lb.*	Very scarce
Lavender 40/42% French	4.50 lb.	7.00 lb.*	Very scarce
Lavender Spike	1.85 lb.	1.75 lb.	Fair
Lemon (California)	3.00 lb.	3.50 lb.	Normal
Lemongrass Native 75%	.50 lb.	.80 lb.	Fair
Limes Distilled W. I.	3.50 lb.	4.75 lb.	Normal
Limes Expressed W. I.	7.75 lb.	8.75 lb.	Fair
Mandarin Italian	4.75 lb.	10.00 lb.	Scarce
Neroli	65.00 lb.	275.00 lb.*	Very scarce
Oakmoss	7.00 lb.	15.00 lb.*	Very scarce
Orange Italian	3.50 lb.	7.00 lb.*	Very scarce
Orange California	1.30 lb.	1.75 lb.	Normal
Orris Concrete	3.60 oz.	7.50 oz.*	Very scarce
Patchouly Sumatra	4.50 lb.	4.80 lb.	Fair
Petitgrain S. A.	1.00 lb.	1.40 lb.	Normal
Pine Needles Siberian	.95 lb.	1.22 lb.	Normal
Rose Otto	7.85 oz.	15.00 oz.	Scarce
Rosemary Spanish	.50 lb.	.70 lb.	Fair
Sandalwood E. I.	5.75 lb.	5.00 lb.	Fair
Styrax Liquid Gum	.55 lb.	.80 lb.	Scarce
Vetivert Java	3.00 lb.	5.30 lb.	Fair
Vetivert Bourbon	4.00 lb.	8.00 lb.*	Very scarce
Ylang Ylang Madagascar	4.25 lb.	12.00 lb.*	Very scarce
Absolutes			
Cassie Farnesiana	220.00	Unobtainable	
Cassie Romain	140.00	Unobtainable	

(*Continued on page 48*)

THE COSMETIC INDUSTRY

For 1940, the value of production of perfumes, cosmetics and toilet preparations has been set at about $225,000,000, an increase of 10 per cent. over the $204,500,000 value for 1939 production, and 17.1 per cent. greater than the value of $192,160,000 for 1937. Corresponding changes were noted in some of the major divisions of the industry. For example, production of perfumes was valued at $10,800,000 in 1937, $10,910,000 in 1939, and $12,000,000 for 1940, while toilet waters (probably including men's after-shaving lotions) increased from $5,250,000 in 1937 to $9,780,000 for 1939 and $10,760,000 for 1940. All creams, with the exception of brushless shaves, were valued at $22,400,000 in 1937, $24,500,000 in 1939, and $27,000,000 in 1940. Lipstick and lip rouges were valued at $5,640,000 in 1937, $7,700,000 in 1939, and $8,470,000 in 1940. Dentifrice production in 1937 was valued at $45,350,000, but declined to $35,950,000 for 1939 and is estimated at $39,540,000 for 1940. This decline from 1937 to 1939 may possibly be tied up with Fair Trade laws, as a consequence of which manufacturers lowered their wholesale prices in order to permit stabilization of retail prices at lower levels. Soap shampoos regained considerable ground previously lost to soapless shampoos in the 1937, 1939, 1940 comparison periods. For soap shampoos the figures were 1937—$4,530,000, 1939—$5,790,000, 1940—$6,370,000 as against soapless shampoos 1937—$2,520,000, 1939—$1,590,000, 1940—$1,750,000. Face powder production has shown a steady increase from $14,390,000 in 1937 to $19,580,000 in 1939 to $21,540,000 for 1940. Other items are enumerated in the accompanying table of wholesale production.

Who buys these cosmetics? Using the 1940 census total of 131,600,000 for the population of the United States, and the 1930 distribution of females by age groups, we arrive at the following tabulation:

WHOLESALE VALUE

Perfumes, Cosmetics, and Toilet Preparations

	1937	1939	1940
Perfumes	$10,800,000	$10,910,000	$12,000,000
Toilet waters	5,250,000	9,780,000	10,760,000
Cosmetic creams	22,400,000	24,500,000	27,000,000
Lipstick and lip rouges	5,640,000	7,700,000	8,470,000
Other rouges	3,210,000	2,850,000	3,130,000
Dentifrices	45,350,000	35,950,000	39,540,000
Depilatories	520,000	550,000	610,000
Soap shampoos	4,530,000	5,790,000	6,370,000
Soapless shampoos	2,520,000	1,590,000	1,750,000
Face powders	14,390,000	19,580,000	21,540,000
Talcum powders	7,700,000	9,260,000	10,180,000
Other toilet powders	3,960,000	4,330,000	4,760,000
Hair dyes	2,420,000	2,170,000	2,390,000
Hair tonics	6,410,000	6,240,000	6,860,000
Hair dressings	8,030,000	8,750,000	9,630,000
Face lotions	9,970,000	9,650,000	10,620,000
Deodorants	4,460,000	7,120,000	7,830,000
Bath salts	1,210,000	1,490,000	1,640,000
Manicure preparations	6,590,000	5,880,000	6,470,000
Brushless shaving Creams	2,360,000	5,300,000	5,830,000
Shaving soaps	9,900,000	7,710,000	8,480,000
Other toilet preparations	14,540,000	17,400,000	19,140,000
Total	192,160,000	204,500,000	225,000,000

Female Population in the United States

Age Group	Number in Age Group
15-19	6,240,000
20-24	5,910,000
25-29	5,330,000
30-34	4,880,000
35-39	4,880,000
40-44	4,160,000
45-49	3,640,000
50-54	3,060,000
Total	38,100,000

Applying these population estimates to total cosmetic production in order to obtain per capita expenditures for cosmetics, we must make certain corrections. Thus, shaving products not bought by women must be eliminated from the total, and for individual items, such as lipstick, manicure, etc., allowance must be made for the fact that women in different age groups vary somewhat in their buying habits. Since retail values are assumed to be approximately double the stated wholesale value, we can estimate the following per capita consumption of perfumes, cosmetics, and toilet preparations in dollars for 1940: total—$11.06; perfumes—$0.90; toilet waters—$1.39; all creams—$1.62; lipstick and lip rouges—$0.54; face powders—$1.20; manicure preparations—$0.42.

Sales of cosmetics by retail outlets are divided about equally among the three major types—department stores, drugs stores, and syndicate stores, each doing about one-third of the total retail business. The distribution of business by months in two of these outlets is quite interesting in that it shows different types of seasonal buying.

Per cent. of Toilet Goods Volume by Months

	Department Stores	Syndicate Stores
January	7.4%	6.1%
February	6.6	6.9
March	7.0	8.2
April	6.5	7.0
May	7.0	7.2
June	8.5	10.7
July	7.1	8.2
August	8.6	9.7
September	7.7	8.3
October	7.8	8.2
November	8.1	9.9
December	17.7	9.6

Department stores, as is generally known, enjoy substantial Christmas business in the cosmetic field; syndicate stores, however, enjoy far less of this type of holiday buying.

Finally, department store sales vary seasonally according to the geographical region. The data may be derived from reports of those Federal Reserve Districts that break down department store sales according to departments. Over a ten year period, the following has been the monthly distribution of department store sales of toilet goods in four Federal Reserve Districts.

Monthly Department Store Sales of Toilet Preparations by Federal Reserve Districts

	New York District	Chicago District	San Francisco District	Richmond District
January	8.4%	7.7%	7.5%	6.3%
February	7.8	7.8	7.0	7.4
March	8.0	7.4	7.6	7.5
April	7.5	7.4	7.4	6.9
May	8.2	7.6	7.6	7.0
June	8.1	7.7	7.4	7.7
July	6.2	6.9	7.2	6.4
August	6.1	7.3	8.1	6.3
September	7.4	9.2	7.3	7.8
October	8.2	8.0	7.7	8.5
November	8.2	7.9	7.6	8.1
December	15.9	15.1	17.6	20.1

F. D. A. OPINIONS

The Food and Drug Administration has expressed the following opinions:

Ovarian Substance: "Receipt is acknowledged of your letter with reference to 'Capsules Ovarian Substance N.F.' We can readily understand the quandary in which you find yourself with reference to the continued distribution of capsules of ovarian substance. It is a fact, in the light of present scientific knowledge, that it would be impossible to consume a sufficient amount of dried ovarian substance to obtain the effects of its estrogenic constituents. There is no reliable evidence that any amount of progesterone is effective by mouth. On the other hand, we have been informed that there is a demand for this material from some physicians. The Food, Drug, and Cosmetic Act was not designed to regulate medical practice and this Administration will not undertake legal action against harmless products which physicians desire to use as medicaments even though there is no scientific evidence that they are of any value whatever. In the case of products such as dried ovarian substance intended for oral administration, each manufacturer must decide for himself whether he will continue to market under any circumstances a preparation regarded by experts in the field as inert, or will continue to supply any existing demand for the article from physicians who may believe they obtain therapeutic effects from its use. The law does require that the label reveals material facts. We think it is a material fact which physicians who use such products are entitled to know that there is no scientific evidence that such products when administered orally possess any therapeutic activity. If, notwithstanding such a situation, any physician desires to continue the use of the medicine that is his prerogative so far as the Food, Drug, and Cosmetic Act is concerned. * * * The same comment would be made regarding ovarian substance intended for oral administration in any other amount and to any other glandular material which is essentially inert under the conditions of use."

SOURCES OF PERFUME INGREDIENTS

An accurate detailed list of essential oils and other perfume raw materials coming from the various countries of the world has been compiled for us by Dr. Ernest S. Guenther, Chief Research Chemist of Fritzsche Brothers.

AFRICA

MOROCCO

Oil Thyme
Oil Origanum
Oil Pennyroyal
Oil Rue
Oil Myrtle
Almonds
Rose Buds

ALGERIA

Oil Geranium
Oil Neroli
Oil Petitgrain
Almonds

TUNIS

Oil Rosemary

EGYPT

Concrete and Absolute of Jasmine
Concrete and Absolute of Cassie

ABYSSINIA

Civet

KENYA COLONY

Oil Geranium (Oil Mawah)
Oil Cypress (*Cupressus lusitanica*, Mill.)
Oil Tagetes ("Orina")
Oil Cedarwood (*Juniperus virginiana*, L.)

ZANZIBAR ISLAND

Clove Buds
Clove Stem Oil

MADAGASCAR, including COMORO ISLANDS

Oil Ylang Ylang
Concrete and Absolute of Ylang Ylang
Oil Basil
Oil Clove Leaves
Oil Clove Stems
Cinnamon Bark
Clove Buds
Vanilla Beans

RÉUNION ISLAND

Oil Geranium
Oil Vetiver
Oil Ylang Ylang
Concrete and Absolute of Ylang Ylang
Vanilla Beans

SEYCHELLES ISLANDS

Cinnamon Leaf Oil
Cinnamon Bark Oil
Oil Patchouly

FRENCH GUINEA (West Africa)

Oil Sweet Orange
Oil Petitgrain

ASIA

ASIA MINOR

Styrax
Gum Mastic
Cumin Seed

ARABIA

Gum Myrrh
Gum Olibanum
Gum Opopanax

BRITISH EAST INDIES

Oil Lemongrass
Oil Sandal
Oil Palmarosa
Costus Root
Cardamom
Pepper
Ginger

CEYLON

Cinnamon Leaf Oil
Cinnamon Bark Oil
Oil Citronella
Ceylon Cinnamon Bark (Quills, Quillings, Featherings and Chips)

BRITISH MALAYA (Straits Settlements)

Oil Patchouly
Patchouly Leaves
Cubebs
Nutmegs

DUTCH EAST INDIES

Oil Citronella
Oil Cananga
Oil Vetiver
Oil Patchouly
Oil Cajeput
Nutmegs
Cubebs
Pepper (Black and White)
Vetiver Root

SIAM

Gum Benzoin

FRENCH INDO-CHINA

Gum Benzoin
Oil Star Anise
Cinnamon Bark

CHINA

Oil Star Anise
Oil Cassia
Cassia Bark
Oil Peppermint
Menthol
Galangal Root
Camphor Oil

JAPAN

Camphor Oil and Camphor Oil Fractions, for instance, Oil Sassafras Artificial
Oil Shiu (Ho Oil)
Oil Peppermint
Menthol
Calamus Root
Valerian Root
Also a few synthetics, among them Heliotropin, etc.

AUSTRALIA

Eucalyptus Oils
Eucalyptus Leaves
Sandal Oil (West Australia)

SOUTH SEA ISLANDS

NEW CALEDONIA

Oil Niauli

PHILIPPINE ISLANDS

Gum Elemi
Oil Ylang Ylang

AMERICA

SOUTH AMERICA

FRENCH GUINEA

Oil Bois de Rose

BRAZIL

Oil Bois de Rose
Balsam Copaiba
Tonka Beans
Oil Sweet Orange

PARAGUAY

Oil Petitgrain
Oil Guaiac Wood

COLUMBIA

Styrax
Balsam Tolu

ECUADOR

Ambrette Seed

CENTRAL AMERICA AND WEST INDIES

SALVADOR

Balsam Peru

TRINIDAD ISLAND

Oil Limes
Tonka Beans

TOBAGO ISLAND

Oil Limes

DOMINICA ISLAND

Oil Limes
Oil Bay Leaves

PUERTO RICO ISLAND

Oil Sweet Orange
Oil Bay Leaves

ST. THOMAS ISLAND

Oil Bay Leaves

JAMAICA ISLAND

Oil Pimento Leaves
Oil Pimento Berries
Pimenta Berries
Oil Limes
Oil Sweet Orange
Ginger
Nutmegs

NORTH AMERICA

MEXICO

Oil Linaloe
Oil Limes
Vanilla Beans
Chillies

UNITED STATES

Oil Orange California
Oil Lemon California
Oil Orange Florida
Oil Grapefruit Florida
Oil Limes Florida
Oil Peppermint
Oil Spearmint
Oil Erigeron
Oil Tansy
Oil Wormwood
Oil Wormseed
Oil Cedarwood
Oil Catnip
Cedar Leaves (Thuja)
Turpentine
Pine
Sassafras
Wintergreen
Sweet Birch
Oil Dill Weed
Oil Mountain Laurel
Oil Hemlock
Also a great variety of isolates and synthetics

CANADA

Oil Spruce
Snake Roots

EUROPE

ITALY

Oil Lemon
Oil Sweet Orange
Oil Mandarin
Oil Bergamot
Oil Neroli
Oil Sage Dalmatian
Oil Helichrysum
Oil Rosemary
Oil Juniper Berries
Orris Root
Juniper Berries
Oak Moss
Concrete and Absolute of Jasmine

SPAIN

Oil Spike
Oil Rosemary
Oil Thyme
Oil Origanum
Oil Pennyroyal
Oil Sage
Oil Cade
Oil Eucalyptus
Oil Sweet Orange
Oil Bitter Orange
Oil Marjoram
Gum Labdanum
Almonds
Safron

FRANCE

Oil Lavender
Oil Lavandin
Oil Spike
Oil Rosemary
Oil Neroli
Oil Petitgrain
Oil Clary Sage
Oil Celery Seed
Oil Parsley Seed
Oil Sweet Marjoram
Oil Sweet Fennel
Oil Sweet Basil
Oil Estragon
Oil Savory
Oil Hyssop
Oil Myrtle
Oil Cypress
Oil Carrot Seed
Oil Verbena
Oil Mustard Seed
Oil Angelica Root
Oil Angelica Seed
Oil Lovage
Oil Cognac
Oil Melissa
Oil Cherry Laurel
Oil Almonds
Oil Hops
Oil Labdanum
Concrete and Absolute of Jasmine
Concrete and Absolute of Lavender
Concrete and Absolute of Rose
Concrete and Absolute of Orange Flowers
Concrete and Absolute of Tuberoses
Concrete and Absolute of Cassie
Concrete and Absolute of Mimosa
Concrete and Absolute of Violet
Concrete and Absolute of Narcissus
Concrete and Absolute of Jonquille
Concrete and Absolute of Oak Moss
Concrete and Absolute of Labdanum
Rose Water
Orange Flower Water
Also many oils distilled from imported raw materials like Cloves, Nutmeg, Ginger, Cumin, Cardamom, Cinnamon, etc.
Furthermore, a great variety of isolates and synthetics.

BELGIUM

Calamus Root
Hops
Valerian Root
Roman Chamomile
Angelica Root and Seed

ENGLAND

Oil Chamomile Roman
Oil Peppermint
Oil Lavender
Many essential oils distilled from imported raw materials.
Furthermore a great variety of isolates and synthetics.

(*Continued on page 48*)

NEW PRODUCTS

New Raw Materials for drug and cosmetic manufacturers are reviewed.

COSMETIC SPECIALTIES

Amino Alcohols and Amino Glycols: New compounds derived from aliphatic nitration products. Used as such in combination with fatty acids to produce white, fine-textured and stable cosmetic creams and emulsions. Commercial Solvents Corp.

Butyl Benzalacetone Oxalate: Sun screen for use in suntan preparations. Prevents light transmission below 4500 A. U. It is a yellow, crystalline solid effective in concentrations as low as one-half of one per cent. U. S. Industrial Chemicals, Inc.

Carbowax: Compound 1500 is a non-volatile, slightly hygroscopic material resembling petrolatum in consistency. It is soluble both in water and in aromatic hydrocarbons and is generally useful as a thickening agent. The 4000 compound is a harder product, resembling paraffin and has the same general solubility properties. Carbide and Carbon Chemicals, Inc.

Deltyl Extra: Odorless oil of vegetable origin. Will not turn rancid, has no acid value, completely soluble alcohol, mineral oils, vegetable oils. Givaudan-Delawanna, Inc.

Diethylaminoethanol: Colorless, hygroscopic liquid, b. p. 162° C. Completely soluble water and alcohol. Combines with fatty acids to form soaps useful as emulsifiers. Carbide and Carbon Chemicals, Inc., Sharples Solvents Corp.

Dipentaerythritol Fatty Acid Esters: New compounds still in the laboratory stage with considerable promise as non-toxic emulsifiers for cosmetic purposes. Heyden Chemical Corp.

Isco Refined Wax No. 352: Marketed as a carnauba wax substitute in flake form. Analysis and characteristics very similar to the natural wax with m.p. 170-180° F., acid no. 3.9, ester no. 64.3. Innis, Speiden & Co.

Mannitan Monolaurate: Viscous, oily liquid, soluble in most organic solvents. Excellent oil-in-water emulsifier for animal and vegetable oils and fats. Atlas Powder Company.

Mannitan Monostearate: Almost colorless, wax-like solid, setting point 45-55° C. Soluble alcohols, alcohol-ethers, oils. Emulsifier for vegetable oils and waxes. Atlas Powder Co.

Methylcellulose: This product can be considered to be a synthetic water-soluble gum. It does not hydrolyze or undergo other chemical change readily and is quite resistant to breakdown by molds or bacteria. It has been successfully applied to the formulation of wave-set mixtures and as an emulsifier for cosmetic lotions. Dow Chemical Co.

Molding Wax No. 525: This is a Japan wax substitute with characteristics very similar to those of the natural product; m.p. 54° C., acid no. 5.4, ester no. 196, iodine no. 10-12. One pound slabs. Innis, Speiden & Company.

Monoethanolamine Sulfite: This is a clear, slightly yellowish viscous liquid with a characteristic odor. It is very slightly alkaline and contains about 60 per cent. of the sulfite. As an ingredient of permanent wave preparations, it leaves no residue, produces a tight wave, and is much more stable than ammonium sulfite. It tends to prevent color development due to oxidation. Mallinckrodt Chemical Works.

Montan Wax Substitute No. 506: M. p. 174-175° F., acid no. 3.5, 51-53 per cent. soluble in petroleum ether. Innis, Speiden & Co.

Nopco Hon Detergent: Fine foaming agent with good detergent powers for use in shampoos, as emulsifying agents, etc. National Oil Products Co.

Nopco Shco Ointment Base: Sulfonated hydrogenated castor oil. Non-alkaline, water-washable ointment base, neutral. Readily dissolves both water and oil-soluble medicaments. National Oil Products Co.

Pentaerythritol: Fatty Acid Esters: Oils and waxes recommended for investigation as emulsifiers and cream bases in cosmetic formulation. Heyden Chemical Corp.

Petrowax: This is a completely refined amorphous wax based upon petrolatum almost entirely free from

liquid and semi-liquid hydrocarbon fractions. It is relatively low melting and has high plasticity without brittleness. It has high value in preventing leakage of oil from either oil-in-water or water-in-oil cosmetic creams. L. Sonneborn Sons, Inc.

Powder Base S. P.: This is an extremely soft white powder to be used in face powder compositions in place of zinc or magnesium stearates. It improves the texture of face powders, imparts adhesiveness and slip, and has mush less tendency to dust off the face than the usual stearates. Mallinckrodt Chemical Works.

Riboflavin: This is one of the heat stable factors of the vitamin B complex, now available commercially. Chas. Pfizer & Co., Inc. Commercial Solvents Corp.

Sorbitol Laurate: Pale, straw-colored liquid. Non-toxic, neutral. Self-emulsifiable in water to make milky emulsions, suggesting use in creams, lotions, milky permanent wave solutions, etc. Glyco Products, Inc. The Beacon Co.

Sorbitol Oleate: Thick, amber liquid, neutral, non-toxic. Soluble in alcohol oils. Self-emulsifiable with water. Glyco Products, Inc. The Beacon Co.

Sorbitol Stearate: Cream colored, waxy solid, m.p. 54-55° C. Partially soluble in alcohol, soluble in hot vegetable and mineral oils. Easily dispersed in water. Glyco Products, Inc.

Stabilizers: G-4 is a diphenylmethane derivative with a very mild taste and odor. Against certain bacteria it has a phenol coefficient of 90. It is soluble in alcohol, fatty acids, and oils and is non-toxic and non-irritating. G-4-50 is the sodium salt with a somewhat lower phenol coefficient and is soluble in water. G-11 has general characteristics similar to G-4 but its phenol coefficient is 180. Givaudan-Delawanna, Inc.

PERFUME SPECIALTIES

Animaline W: This compound crystalline aromatic of the musk type takes its name from the animal note for which genuine musk is so valuable. It is only in solution that the true beauty of this musk odor becomes apparent. Animaline W is soluble in benzyl benzoate (1 to 4) and similar solvents, as well as in alcohol, essential oils, and most aromatic chemicals. Schimmel & Co.

Citronal is a chemical with a fresh clean lemon odor of interest today because of the shortage of Oil of Bergamot and Oil of Lemon. Not only is it free from the objectionable by-odors found in Citral but it is very stable. Through its use a lasting lemon odor can be produced in soaps and creams and it is also of great interest in the manufacture of fine Eau de Colognes. General Drug Co.

Civet Paste W Synthetic: This synthetic aromatic eliminates many of the disadvantages of natural civet, such as the non-active waxes and other extraneous materials, as well as causing less discoloration. It is twice as strong as natural civet. Schimmel & Co.

Creme de Mousse, Artificial: This new synthetic oak moss preparation is eminently useful in the production of medium and low-priced perfume compositions of the chypre type. Its strong herbal character combined with great lasting quality makes this product an indispensable component in all modern heady perfumes. It is hardly necessary to mention that the present cutting off of supplies of natural oak moss resinoids adds further impetus to the possibilities of this remarkable synthetic oak moss preparation. Schimmel & Co.

Cyclamal is an aldehyde of great strength, valuable in most floral compositions, with an aldehyde content of over 80%, its fine character enabling it to be used in the finest perfumes as well as in soaps and cosmetics. It is particularly valuable in odors of the type of Lily of the Valley and Lilac. General Drug Co.

Floranol is a single chemical with a fruity rose note. Though mild, it is very persistent and has the faculty of harmonizing the other ingredients in a perfume composition. It is soap fast and is often used in soap odors of the Tea Rose type. It will not discolor in creams or soaps. General Drug Co.

Heliocrete "Sch. & Co." This is the answer to the inadequacies of Heliotropine. It is as pleasant and fragrant as the flower itself and is entirely free from any chemical by-odor, and it resists alkali. It is very effective as a fixative and as it is four times as strong as Heliotropine its use affords a distinct saving. Schimmel & Co.

Indole: This is now being produced domestically. The material is fully equivalent in purity, strength and odor to previously available supplies, which were imported from Central Europe.

Indole occurs in most natural floral odors. It is the ingredient giving natural jasmine its distinctive odor, and is an important element of lilac fragrance. E. I. du Pont de Nemours & Co., Inc., General Drug Co.

Muscaro W: The genuine musk odor is here reproduced with great success and although it has a heavy consistency, this product is readily soluble in benzyl benzoate, essential oils, alcohol and similar solvents. For high-priced perfumes use Muscaro W in combination with the genuine tincture of musk in a proportion of 0.5 to 1 part genuine tincture per 10 parts of Muscaro W. Schimmel & Co.

Osmodor Cabardon: This is an effective and lasting musk base, approaching the reproduction of genuine musk from an entirely different angle than other musk specialties. A 3% solution of Osmodor Cabardon may be used in substitution of the natural tincture of musk. Schimmel & Co.

Osmodor Rosanova: This is a very powerful rose base producing unusually rich effects, excellent in modern red rose and rose centifolia compositions. Schimmel & Co.

(*Continued on page 37*)

AMINO GLYCOL IN COSMETICS

By JOSEPH KALISH

AMINO glycol is the somewhat abbreviated name that has been adopted for 2-methyl-2-amino-1, 3-propanediol—$CH_3C(CH_2OH)_2NH_2$—the new synthetic organic chemical for cosmetic emulsions. It is a yellowish-white crystalline product, odorless, and extremely soluble in water. Solutions are water-white and transparent and up to 250 parts of amino glycol may be dissolved in 100 parts of water. The pH of a tenth-molar solution is 10.78, indicating low alkalinity.

No special precautions are required in storing Amino Glycol since it does not take up moisture from the air, although it will absorb carbon dioxide. It is soluble in alcohol, but not in mineral oil. Its equivalent weight is 105, that is, 105 parts of amino glycol will combine with 284 parts of pure stearic acid, 282 parts of pure oleic acid, etc. In general, one part of potassium hydroxide is replaceable by 1.6 parts of amino glycol (potassium hydroxide 85% pure) or one part of sodium hydroxide (90% pure) may be replaced by 2.4 parts of amino glycol. Exact equivalents for 100% purities are 1.87 amino glycol equivalent to one potassium hydroxide or 2.63 parts equivalent to one part of sodium hydroxide.

Since amino glycol itself is an extremely mild base, and, in addition, has been thoroughly tested and proven to be entirely harmless to the skin, its fatty acid compounds because of their high emulsifying power, are ideally suitable for cosmetic formulation. Moreover, with pure fatty acids, they are light in color or white and do not darken on aging. This is especially important in the preparation of creams and lotions that are expected to stay white.

Amino glycol stearate may be made by melting 284 parts of stearic acid and adding, a small portion at the time with constant stirring, 105 parts of amino glycol. The mixture thickens and becomes difficult to stir, but neutralization goes to completion. On cooling, the resulting waxy mass may be reduced to a fine white powder which is soluble in heated water and alcohol. Although not soluble in mineral oil, this and other soaps of amino glycol are characterized by their ability to keep oil emulsified without leading to mixtures that are too soft. In fact, creams made with amino glycol are harder than those made with potassium hydroxide, but hold oil far more firmly.

Formulas

Cosmetic products containing both water and oil or wax components immiscible with water, are generally offered as emulsions, either flowing liquids called lotions or liquid creams, or solid or semi-solid mixtures called creams. The latter group is easier to formulate from the standpoint of stability, but texture and general acceptability are important qualities that must be considered. Important in formulation are the emulsifying agent, which determines to a large extent the stability of the product. In addition, a thickening or auxiliary emulsifying agent must also be present to give the product its desired consistency. Finally, a balance between the water and oil proportions largely determines consistency and has considerable influence on stability.

As a general rule, fatty acid combinations are more active as emulsifiers if they are made within the emulsion. For this reason the procedure recommended for all cosmetic emulsions involves solution of the amino glycol in water which is then mixed with the melted mixture of fats and oils, including the stearic or other fatty acids. It is preferable to add the melted fats and oils to the aqueous solution. Stirring must be thorough and it is advisable to make provision for rapid stirring at first, to be followed by slow, powerful mixing after the mixture has begun to thicken. In any case, the stirrer must be completely immersed in the mixture to avoid as much as possible the incorporation of air into the emulsion.

Vanishing creams are characterized by the fact that they contain a large excess of stearic acid over and above the amount necessary to react with the base used. When they are rubbed into the skin, water and other volatile ingredients are driven off leaving a practically invisible film of the fatty acid on the skin sur-

face. Spermaceti, cetyl alcohol, and similar products should also be present for their emollient, skin softening effect. Glycerin, or a similar hygroscopic agent, must be present in vanishing creams to retard evaporation of water in the jar and also to prevent "rolling" of the film as the cream is spread on the skin and the water evaporates.

Stearic acid	25.0
Spermaceti	5.0
Amino Glycol	1.5
Glycerin	8.0
Water	60.5

The amino glycol, glycerin and water are heated together to about 75° C. (165° F.) in one container while the stearic acid and spermaceti are being melted together and heated to the same temperature in another vessel. When both mixtures are at the same temperature and homogeneous, the melted fats are poured in a thin stream into the thoroughly stirred aqueous solution. After the two solutions have been mixed, heating is discontinued and vigorous stirring continued until mixing is uniform and thickening has begun to take place. At this point, stirring should be slower and more nearly of a kneading action, and is continued until the mixture is practically at room temperature. At first the cream seems translucent and soapy, but later becomes white. As with all stearate creams it must be allowed to stand overnight and then broken up and mixed again until completely smooth. The product is smooth, brilliantly white, and moderately soft. It rubs out well and is a wholly acceptable vanishing cream or may be used as a vehicle for all medicaments with which it is compatible.

The cream may be made heavier by reducing the water content, by increasing the stearic acid proportion, or by reducing the amount of amino glycol slightly.

Hand Creams are vanishing or stearate creams with added emollience for skin softening. They must rub out quickly and completely without leaving residual stickiness and should leave the skin smooth and white. Glycerin, as a hygroscopic agent, not only serves to prevent the cream from drying out in the jar and rolling on the skin, but also acts as an effective skin softener. Too much must be avoided, however, because of possible irritation of delicate skins by this substance. Gums are usually added to hand creams and lotions because they impart a "silkiness" not usually obtained otherwise. Quince seed mucilage is often the gum of choice since it seems less likely than others to leave the hands sticky.

Stearic acid	20.0
Cetyl alcohol	1.0
Amino Glycol	1.5
Quince mucilage	10.0
Glycerin	10.0
Water	57.5

This cream is made in the same manner as the preceding vanishing cream, the quince seed mucilage being stirred into the finished cream. This mucilage is made by allowing 2 parts of clean quince seed to stand overnight with 100 parts of water containing 0.1 part of an effective preservative (methyl parahydroxy benzoate is recommended) and then straining through muslin or a fine screen. Heat will hasten the extraction of the mucilage from the seeds but must be used cautiously to avoid discoloration of the mucilage. Occasionally a small amount of titanium dioxide is ground into the cream to give greater skin-whitening power. From one to two per cent. is adequate; zinc oxide may not be used in place of the titanium dioxide since the more reactive zinc compound will cause the cream to break down.

Brushless shaving creams, or latherless shaving creams, again are stearate creams modified slightly from the parent vanishing type to make them suitable for the purpose intended. These creams are applied along with water to the wet face and spread out to a thin cream. Since the beard has been previously softened by the usually recommended washing with soap and water, the cream probably acts only mechanically to support the beard and to lubricate the razor edge, and should be formulated accordingly. As an additional property, concommitant with the ease of spreading on the face, the cream should easily be washed out from between the notches of the safety razor. Lubrication is enhanced by the presence of a small amount of mineral oil, while easy water solubility is given by a larger than usual proportion of the amino glycol compound.

Stearic acid	22.5
Mineral oil	2.3
Amino Glycol	1.8
Glycerin	7.5
Water	65.9

This cream is made according to the same procedure as the vanishing and hand creams. It is a white, somewhat pearly preparation, ideally suited for its intended use.

Protective Cream

Protective creams, not actually cosmetic products, since they are most useful industrially, are nevertheless made just as are the usual cosmetic creams. They are intended for application to hands and other exposed skin surfaces before exposure to excessive dirt difficult to remove from the skin or to industrial poisons likely to cause dermatitis. The cream is rubbed into the skin surface until it has apparently completely disappeared. The resulting surface should be dry and not greasy to the touch. The invisible film left behind acts as a barrier to harmful substances likely to irritate the skin, while black greases from machinery, printing inks, etc. are easily removed along with the cream by easy washing in ordinary soap and water. Thus the requirements for a cream of this type are that it forms a uniform, invisible film on the skin surface, interpose a barrier against the penetration of outside materials to the skin surface, be easily removed with water or soap and water, and at the same time emulsify outside greases mixed with it to permit their easy removal. Thus, in the formula given below, butyl stearate is added as a skin softener and as an oil which penetrates below the skin surface to act to some extent as a barrier; amino glycol is present in large enough quantity to facilitate the emulsification of the cream and any greases superimposed on it; zinc

(*Continued on page 36*)

THE CITRATES

By M. A. LESSER

The citrates, as a group, have long maintained an important and esteemed position in medicine and pharmaceutical manufacture. Food and beverage producers, as well as those in certain other branches of industry, have likewise found many invaluable uses for these substances. However, up to 1923, because supplies were almost entirely dependent upon foreign, rather monopolistic sources, the wider utilization of these really valuable chemicals was hampered and limited by high price considerations. In that year, as the result of more than two decades of intensive research, commercial production of citric acid by a new fermentation process was begun, and the citrates entered into a new phase of commercial importance. Because of this development, as well as increased output of domestic citrus materials, imports of citrates into the United States had practically ceased by 1927.[1] Indicative of the present citrate position in this country is their growing production, their constantly expanding market and prices that have continuously tended to become lower.[2]

Formerly, the chief commercial sources of the natural variety of citric acid and its salts were oranges, lemons, limes, pineapples and other citrus fruits, though the acid does occur in many other plant tissues. While these still remain a source of some citrate, the development of the fermentation process has brought about a substantial displacement of these citrus fruits as basic raw materials. Today, sugar is the essential raw material, and by the action of fungi of the *Aspergillus niger* strain, under carefully controlled conditions, the sugar molecule is converted to one of citric acid. Moreover, citric acid from citrus fruit juices and that obtained from fermentation processes are chemically and physiologically identical and indistinguishable from each other.

The ready availability of citric acid, and hence its salts, at a comparatively low price, coupled with the fact that it is available in the anhydrous crystalline form, have opened new fields of application for these substances, some of them of great potential importance. Nevertheless, the greatest field of usefulness for the citrates is still that of pharmaceuticals. According to one report,[1] about 65 per cent. of the domestic consumption of citric acid is used for medicinal purposes, including the manufacture of citrates, 15 per cent. for foods, 9 per cent. in candy and the rest in other industries. Although these proportions will probably change with new applications in industry, scientific studies and investigations indicate many new important medical uses for the citrates.

Without doubt, citric acid is the most important of the citrates, both as a source of the other salts and from the frequency of actual application. First isolated in the solid state from lemon juice by the Swedish chemist Scheele, in 1784, citric acid ($H_3C_6H_5O_7.H_2O$) crystallizes in large, transparent, colorless, rhombic prisms. It is very soluble in water and freely soluble in alcohol. Chemically, citric acid is a tribasic acid; its alkali salts are soluble in water, the others are mostly insoluble.

Citric acid has an agreeable, purely acid taste and is one of the most palatable of the organic acids. It is readily assimilated and completely metabolized in the body. Citric acid is oxidized in the organism to carbonic acid, so that it does not act as an acid in the tissues.[3] Studies of the physiologic action of citric acid and the citrates are yielding valuable information on their function, utilization and fate in the body.

The most firmly established use for citric acid is as a flavoring material for medicaments, the sour tang being especially valuable to disguise salty, bitter or insipid tastes. Either citric acid in about 0.5 per cent. proportions, or Syrup of Citric Acid U.S.P., which is especially designed for such uses, may be employed. The latter is particularly adapted for the administration of magnesium sulfate and other saline drugs, iron salts, quinine, strychnine, codeine and other bitter alkaloids. Similar uses are found for Syrup of Orange U.S.P. which also contains citric acid.[4] Fantus[5] is of the opinion that these two artificial fruit syrups, Syrup of Citric Acid and Syrup of Orange, are also suitable as vehicles for the alkaline salts of organic acids that are

incompatible with the true fruit syrups used in pharmaceutical manufacture.

This authority also warns of the incompatibility of acid syrups with carbonates and bicarbonates, which produce a slow but prolonged effervescence. It is this very action, however, that makes citric acid so valuable in the preparation of effervescent salts. Such salts consist of the medicinal agent mixed with an alkaline bicarbonate and an organic acid. This forms a convenient method of administering various salts; the effervescence makes them more palatable, more acceptable to the stomach and aids their absorption. This effect is produced by employing sodium bicarbonate 83.5 parts, citric acid 70 parts, or tartaric acid 75 parts; or both. The citric acid, however, produces better granules and a slight excess is generally included to give a pleasant taste. Similar combinations are employed in tablet making to produce more rapid disintegration when used. Such tablets, however, must be protected against moisture which renders the "disintegrating" agents ineffective.[5]

Aside from these purely adjunct applications in pharmaceuticals, citric acid has some definite medicinal uses. In about one per cent. solution, the acid is used as a refreshing, refrigerating drink in fevers and the like.[6] When given hot, it induces sweating. The old fashioned "Glycerine-Lemon and Honey" combination, so long employed in the treatment of coughs, undoubtedly owes a good deal of its effectiveness to the natural citric acid present. A more modern version of this cough compound has been given in the British "Pharmaceutical Journal":

Citric acid	3.0 parts
Oil of lemon	0.3 part
Glycerine	8.0 parts
Tincture of ipecac	1.0 part
Honey (solidified variety) to	100.0 parts

However, modern medicine has found other valued uses for citric acid. For example, in the "dry" treatment of certain forms of leucorrhea such as senile vaginitis and trichomonas vaginitis, Adair and Hesseltine[7] recommend a powdered mixture of 95 per cent. lactose and 5 per cent. citric acid for the office treatment of this condition. From 3 to 6 grams of the powder are used. Tablets containing this mixture were advocated for daily home treatment.

For many years, doctors had been searching for a method to remove kidney stones without the need for surgical intervention. Various methods for dissolving such stones had been advocated, but none were successful. One approach toward solving this problem by means of a sodium citrate-citric acid combination was recently reported by Albright and his associates.[8] While their work is only of a preliminary nature, it is quite indicative. In one case, a patient with kidney stones composed of cystine was given one teaspoonful of sodium citrate three times a day to keep the urine alkaline. In this instance, the intrarenal stones gradually disappeared. However, this kind of treatment could not be applied for other types of stones, and a new form of treatment was tried. A method for introducing a citrate solution "from below", by means of a special catheter, was used and proved effective in dissolving calcium phosphate stones in the bladder in one case. The solution employed consisted of:

Sodium citrate	45.2 Gm.
Citric acid	38.0 "
Distilled water, to make	1000.0 cc.

"This solution," it is reported, "combines the effect of acids in dissolving phosphates with a specific effect of citrate in dissolving calcium salts by decreasing the calcium ion concentration."

Another sodium citrate-citric acid combination offers interesting possibilities in the treatment of infantile rickets. Two patients with infantile rickets were treated with the citrate mixture as an antirachitic agent. The daily amount of citrate used for each case corresponded approximately to that contained in five or six large oranges. No vitamin D was given. Nevertheless, clinical cure of the infantile rickets was evidenced by X-rays taken during the citrate treatment, and the early date and amount of lime salt deposition compared favorably with that obtained when cod liver oil was used. This new citrate therapy not only offers an important adjunct to the standard antirachitic vitamin D therapy, but there are indications that it may also be applicable to other disorders of calcium and phosphorus metabolism.[9] Another point worth considering is, that with supplies of cod liver oil growing scarce as a result of the war, this citrate treatment may prove of major importance.

Laboratory studies[10] on rats have served to substantiate the value of citric acid combinations as calcifying agents. However, a citric acid-potassium citrate mixture was found to give the greatest average response as shown by the increase in bone ash values of 14 to 16 per cent. The most effective single salt was potassium citrate which gave values of 13 per cent. It was also found that the calcifying effect of the citrates was unrelated to sex, gain in weight, or food intake. Of considerable related interest is the European report[11] that the addition of citric acid to undiluted cow milk improves the calcium, magnesium and phosphorus balance of infants and counteracts dyspepsia.

Citric acid has several varied uses in cosmetic preparations. Here it serves as a mild astringent for skin preparations and as a bleaching agent for both the skin and nails. It is also employed to some extent in the formulation of lemon rinses for the hair as well as burn, bath and mucilage preparations.[12, 13]

Although the uses of sodium citrate and potassium citrate are quite similar, the indications of the literature, to say nothing of price considerations, point to the growing predominance of the sodium salt. Sodium citrate ($Na_3C_6H_5O_7.2H_2O$) has an established place in therapeutics as a systemic alkalizing agent. Compared with other alkaline carbonates and bicarbonates, sodium citrate has the advantage of not disturbing the

digestion, and since it does not cause carbon dioxide formation in the stomach, is free of the discomforts of gaseous distention and flatulence. This salt has found valuable employment as a means of alkalizing the urine in such conditions as pyeletis, cystitis and urethritis. It may be advantageously employed with sulfanilamide in the chemotherapy of urinary tract injections. The salt is often administered as a prophylactic measure against acidosis in infections and contagious diseases and in all febrile conditions where there is a tendency toward acidosis. Experimental studies[14] with dogs on induced alcohol acidosis showed that a combination of sodium citrate and sodium bicarbonate restored the alkali reserve even in the presence of large quantities of alcohol. However, the combination had no effect on the disappearance of the alcohol from the blood.

During the last year, one of the large pharmaceutical manufacturers has been sponsoring a new alkalizing preparation based on disodium hydrogen citrate ($Na_2HC_6H_5O_7$). This salt, chemically closely related to the standard trisodium compound and with similar physiological actions, is claimed to be more palatable and, being slightly acid, is said to disturb digestion less. The indications for this citrate are the same as for the standard preparation.

Sodium citrate is also a familiar ingredient in cough remedies. In such preparations, the drug not only acts to liquefy the bronchial secretions, but because of its alkalizing action, also helps to prevent acidosis in febrile conditions.[15] Potassium citrate similarly finds frequent use in such products.

One of the most important uses for sodium citrate is concerned with indirect blood transfusion methods, now such an important part of surgical and other life-saving procedures. In such transfusions, 0.25 per cent. of sodium citrate is added to the donor's blood after it is drawn to inhibit clotting, since the citrate acting, as a calcium inactivator, makes the blood noncoagulable *in vitro*. Not only does such treatment permit more leisurely and therefore more efficient transfusions, but equally important, it is possible to preserve the blood for a period of about a week.[5] Prepared solutions containing the correct amount of sodium citrate in physiological saline are available on the market. Foreign studies[16] indicate that the addition of a small amount of glucose to the citrate is especially advantageous in preserving blood.

Even though sodium citrate retards blood coagulation in the test tube, the intravenous injection of moderate amounts of this agent definitely shortens the coagulation time of the circulating blood. This value, however, returns to normal within twenty-four hours.[6] If, however, the dosage is too large or too rapidly administered, symptoms of tetany may appear, followed by respiratory or cardiac collapse.[17] Because of this property, sodium citrate was tried in the treatment of hemorrhagic disease of the newborn in a series of infants in whom the blood citric acid levels were far below normal. Although injections of this substance usually caused a shortening of the coagulation time, they had no effect on the hemorrhage.[18]

The intravenous injections of sodium citrate solutions have been found of benefit in the treatment of certain peripheral vascular diseases, particularly Buerger's disease.[19] Administration of 250 cc. of a 2 per cent. solution of the salt as often as every day or infrequently as two or three times a week for a considerable period has proven helpful in many cases. The drug is also given orally. Such treatments, coupled with a suitable regimen, have been followed by excellent results.[20]

Sodium citrate has other well-established as well as newer therapeutic applications. Both the sodium and potassium salts are valuable as diuretics. Sodium citrate has been employed in the treatment of Addisons disease, but there the sodium ion is important. In this case the drug is used to replace the constant loss of sodium which is characteristic of the disease.[17] More recently, a combination of sodium citrate, given by mouth, and calcium gluconate, administered intravenously, gave complete recovery in a case of calcinosis universalis, a comparatively rare disease in which lime salt deposits are found in the tissues.[21]

It is hardly necessary to go into a separate discussion on potassium citrate, since, when given orally, its action as an alkalizer, expectorant or diuretic are essentially the same. As a diuretic, potassium citrate is not as unpleasant to take as the other potassium salts. In addition to its action to increase the urine secretion, this drug also acts as a diaphoretic or sweat-inducing drug.[17] The official preparation, Effervescent Potassium Citrate, a mixture of potassium citrate with sodium bicarbonate, tartaric acid and citric acid, presumably owes its effects to the sodium tartrate formed by the reaction occurring during effervescence, according to Sollmann.[6]

The other citrates have rather limited applications in medicine and the allied arts. Magnesium citrate, for example, is chiefly employed as the Solution of Magnesium Citrate U.S.P. This popular preparation, dispensed in tightly stoppered bottles, is a pleasantly flavored, agreeable, effervescent saline purgative. An extensive study of the factors influencing the stability of this solution was made in 1938 by Crossen and Rogers[22] and should be of value to those interested.

In the days when citrates were imported, the raw material was crude calcium citrate. Today this salt has only a few uses. It has limited pharmaceutical employment as an alkalizing agent and as a potential source of calcium. Calcium citrate has been suggested as an ingredient of tooth pastes and powders.

The various iron salts of citric said, usually used in a combination with another citrate; iron and ammonium citrate, green iron and ammonium citrate, iron and strychnine citrate, and iron and quinine citrate, are employed as hematinics, chiefly for the treatment of anemia to increase the percentage of hemoglobin and

the number of red blood cells. Of these, iron and ammonium citrate is the most important. The function of the ammonium salt in this combination is to make the iron citrate more readily soluble. According to the "Useful Drugs" of the A.M.A.,[3] iron and ammonium citrate is practically non-astringent and is one of the more widely used of the soluble iron preparations. It may be dispensed in water, aromatic elixir or syrup. Green iron and ammonium citrate is given by parenteral injection as a hematinic. The other salts have but limited use today.

Caffeine citrate is undoubtedly the most important of the more complex citrates and occupies a prominent place among the drugs prescribed by physicians. It is a white powder consisting of a mixture of about equal parts of caffeine and citric acid and is mainly employed as a stimulant in nervous exhaustion, narcotic poisoning and other conditions, and as a diuretic. The free acid makes this preparation unsuitable for hypodermic use. Effervescent caffeine citrate is also available. This is a mixture of caffeine citrate (4 per cent.), sodium bicarbonate, tartaric acid and sugar.[17]

A check of the research and patent literature indicates a growing utilization of the citrate radical, some of which refer to medically important substances. Whether or not price considerations have entered into this picture is hard to say, but the number of patents being issued for citrate compounds is increasing.[23] In one recent patent,[24] for example, it is claimed that a combination of citric acid with procaine produces a local anesthetic which is more potent and yet less painful when its effects have worn off. In another patent,[25] specifications are given for making phenylmercuric citrate by heating phenylmercuric hydroxide with citric acid to produce a white powder that is highly germicidal.

The importance and applications of the citrates in the field of medicine are constantly increasing, but the indications are that they will find even greater employment in other fields. The acid and its derivatives have been suggested for a wide variety of applications in the chemical and allied industries such as plastics, rubber, lacquers, varnishes, inks, textiles and a host of specialties.

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Amino Glycol in Cosmetics

(Continued from page 32)

stearate is included as the major "barrier" component since it is a flaky, insoluble compound that can make an impermeable coating; stearic acid is reduced in quantity in order to keep the consistency of the cream down.

Stearic acid	15.0
Butyl stearate	5.0
Amino Glycol	2.0
Zinc stearate	15.0
Water	63.0

This cream again is made in the usual way, the zinc stearate being ground into the finished cream. The product is white, pearly, and highly effective.

Cleansing creams are characterized by their high mineral oil content, which is the most important cleansing agent they contain. Ordinarily, these creams are based upon beeswax and borax as the emulsifying combination, with enough water present to give the proper texture and consistency. In this instance, however, amino glycol has proven to be an extremely active emulsifier component, and beeswax is not required for stable, white creams. The amount of oil present may vary from sixty per cent. downward, with from thirty to forty per cent. being most suitable. Paraffin is utilized to stiffen the cream, ceresin assists in preventing "bleeding" of oil, while enough amino glycol is present to combine completely with the stearic acid to make the emulsifying agent. Water is important in that the proportion present largely determines the consistency of the cream and its texture. Although none is present in the formula given, a small amount of emollient, such as butyl stearate, cetyl alcohol, etc. is useful in counteracting the usual drying effect of cleansing creams.

	I	II
Stearic acid	8.0	8.0
Paraffin	7.0	
Mineral oil	30.0	35.0
Petrolatum		10.0
Ceresin	2.0	
Amino Glycol	3.0	3.0
Glycerin		5.0
Water	50.0	39.0

The stearic acid, paraffin, mineral oil, petrolatum, and ceresin, as called for by the respective formulas, are melted together at about 75° C. (165° F.) and the amino glycol, glycerin, and water are heated together in another vessel to about the same temperature. The two solutions are mixed together and stirred until cold, observing the usual precautions against introducing too much air and producing a frothy product. Both creams are smooth, white, and lustrous, the first being somewhat softer and spreading more readily.

Lubricating, night cream, conditioning cream are some of the names now acceptable under new regulations for products formerly known as tissue creams. These can be considered to be similar to cleansing cream formulas with a high proportion of components

absorbable by and beneficial to the skin in place of some of the mineral oil. Incidentally, all of the mineral oil should not be replaced, since this is useful in reducing stickiness and also in enabling the skin to be wiped clean before the application of make-up. Ingredients in the formula below are self-explanatory, and the manufacturing procedure is the same as for previous creams.

Stearic acid	11.3
Mineral oil	6.0
Lanolin	3.7
Cocoa butter	1.5
Butyl stearate	2.3
Glycerin	3.8
Amino Glycol	1.5
Water	69.9

This is a yellow-white, somewhat heavy cream, of relatively good texture.

Amino Glycol has been utilized in the formulation of a particularly good hand lotion which has the desirable properties of being white, stable, creamy, easily rubbed into the skin without residual stickiness, and leaving the hands soft and smooth. The emollients are cetyl alcohol (also acting as an auxiliary emulsifier) and butyl stearate, with quince seed mucilage for thickening, additional stability, and the effect on the skin.

Hand Lotion

Stearic acid	4.0
Cetyl alcohol	1.0
Butyl stearate	3.0
Amino glycol	0.8
Quince seed	0.5
Water	90.7

A thick cream is made from the above ingredients without the quince seed and with only half of the water specified. Meanwhile, the quince seed is soaked with the rest of the water (including preservative), strained, and the mucilage stirred into the cream. The product thickens considerably after standing several days and may be thinned with water is desired.

In the above formulas, perfume has been omitted as having no influence on the formulation. It is obvious, however, that a cosmetic preparation is not completed without the addition of perfume and often color. Perfume dissolved in a small amount of high quality specially denatured alcohol is customarily added in the last stages of manufacture, being stirred into the batch after the temperature has declined to a point where evaporation loss need not be considered. Color is added as an aqueous solution to the finished preparation, or insoluble pigments may be ground with the completed cream. Preservatives must be added where sensitive materials are present.

New Products

(Continued from page 30)

Pogostemol: A recent development, and one which has been of greatest importance with the increasing uncertainty of supplies from abroad, is Pogostemol, which is highly efficacious when used in place of the important oil of Patchouly. It not only incorporates to a remarkable degree the odoriferous characteristics of Patchouly oil, but also far surpasses the latter in its strength and fixing ability. Schimmel & Co.

Skatole: This product, a homolog of indole, is now also being produced domestically for the first time. It is being supplied in a purer grade and at a lower price than the former imported supplies. Eastman Kodak Co.

DURING THE PHARMACOPOEIAL CONVENTION LAST MAY, a request was presented for the publication from time to time of research problems, which, if solved, would assist in the work of revision. To comply with this request the Chairmen of Sub-Committees have been requested to suggest subjects which in their special fields were particularly important.

The following subjects have been offered:

Method for biological assay of Ergot that measures content of both Ergotoxine and Ergonovine types of alkaloids.

Efficient and inexpensive method for biological assay of Aconite and its preparations.

Statistical studies of value of Anti-pneumococcic Serums in general practice.

Suitable standard of assay for Rheum based upon Anthraquinone content.

Comparative anatomy of rhizomes and roots of Chinese Rhubarbs yielded by *Rheum officinale*, *R. palmatum*, *R. palmatum* var. *tanguticum* and hybrids between these and other Rheum species including *R. Rhaponticum*.

Further studies of assays of Cantharidies, Ipecac, and Capsicum.

Chemical assay of Aconite and Aloe.

Separation of Strychnine and Brucine.

Therapeutic value of reduced iron.

Absorption of pure powdered electrolytic iron from alimentary tract.

Rapid, accurate method for determination of pH of distilled water.

Further study of limit of unsaturates test in Cyclopropane.

Heavy metals' test for Diluted Hypophosphorous Acid.

Oil of Cassia, tests and constants.

Oil of Nutmeg, detection of Pinene or redistilled Oil of Turpentine.

Oil of Peppermint, tests and constants, (distinction between unrectified and rectified).

Stability of Fluidextract of Ergot.

Tincture of Digitalis.

Study of U. S. P. Tincture and comparison of tincture made from defatted drug to determine difference, if any, in activity.

Cytogenetical study of Rheum officinale, Rheum palmatum and other Asiatic Rhubarbs.

Cytogenetical study of Digitalis purpurea.

OIL OF PETITGRAIN

By DR. ERNEST S. GUENTHER

(Concluded from December)

Theoretically, the season for distilling petitgrain oil should last from August to September (the spring and early summer of Paraguay) and not later than February. The yield of oil from the leaves is highest during August/September and diminishes with each succeeding month. During May to July, Paraguay's winter months, the plant is dormant and contains much less essential oil. In practice, however, the many small settlers and distillers pay very little attention to these facts and distill whenever they are in need of money or have nothing else to do. In normal years, planting of the main crops is completed by December and during the succeeding months, before these main crops can be harvested, the settlers run short of cash and, therefore, take up the distillation of petitgrain oil. Another consideration is the water supply, because during prolonged spells of drought the wells dry up and distillation must be stopped temporarily. Thus, the producers distill petitgrain oil at the most opportune times, with little regard for the life of the trees or the highest possible yield of oil. In general, production of Paraguay petitgrain oil is influenced by the market price of the oil as compared with the price of other domestic crops.

Distillation

The producers distill leaf material harvested from their own property or purchased from neighboring settlers who do not possess their own stills. The cut leaves should be distilled immediately; otherwise fermentation would turn them black with subsequent loss of oil. Fermentation takes place readily during storage, if the leaf material is stacked up too tightly.

A typical still consists of a simple iron vessel of 200 to 300 liters capacity, which serves as a steam generator. (Government regulations prohibit the employment of copper stills which could be used for the clandestine and illegal production of spirits.) This iron tank is heated by open fire, wood from the near-by forests serving as fuel. The steam thus generated enters at the bottom of a wooden vat of conical shape, holding from 300 to 600 kilos of leaves. This vat is usually not provided with a perforated grid and the lower leaf material is, therefore, in direct contact with boiling water condensed from the steam.

About six hours are required to distill one charge of leaves. During the height of the season, the producers operate day and night, in order to work up the accumulating leaf material. Of course, six hours is a long time to distill one charge of leaf material, but it is necessitated by the high ratio of steam condensed in these crude stills and also by insufficient cooling in the primitive condensers. This long contact of boiling water with the leaf material, in turn, causes considerable saponification of esters. It is a case quite similar to the distillation of oil of lavender in Southern France. Years ago, Schimmel & Company proved by experiments in their Barrême plant that the ester content of lavender oil could be increased from the usual 35 to 50 per cent. and even higher by distilling the plant material very rapidly and with direct steam which has a somewhat higher pressure than that generated by direct fire distillation. Similar experiments, carried out in Paraguay in a special still constructed in Grasse, yielded petitgrain oils containing up to 80 per cent. linalyl acetate instead of the usual 40 to 50 per cent. Distillation in this case could be shortened to only twenty minutes.

The yield of oil depends upon many factors, such as condition of the planting and the leaf material, the season, weather, etc. The amount of leaves required to yield one kilo of oil varies from 200 to 400 kilos. Young, healthy and vigorous trees seem to yield more oil than very old and ligneous trees. Old leaves contain less oil than young ones. Leaves from a tree trimmed during the preceding year yield more oil. Material cut, during the best season, from an airy, sunny, well kept and weeded planting yields one kilo of oil per 200 to 240 kilos of leaves, while material cut from jungles, through which the sun can hardly penetrate, yields one kilo of oil per 400 kilos of leaves. The yield of oil usually corresponds to the quality of the oil, its ester content and fragrance.

Summarizing, we find that the following factors influence the yield and quality of Paraguay petitgrain oil:

1. Selection of leaf material from the proper tree.—"Apepú jhai," the bitter-sour subvariety, gives better results than "Apepú jheé," the semisweet subvariety. The oil from the latter has a much lower ester content; the yield, too, is inferior.

2. Soil condition.—Leaves cut from trees growing in the plains give a lower yield and quality of oil than the leaf material from the Cordilleras.

3. The season.—Yield and quality of oil are highest from August to September and from then on fall off gradually. From June to August the yield and quality are poorest.

4. Condition of the plant material.—Leaves from well kept, airy and sunny plantings give a better yield and higher quality of oil than the leaves from dense forests and jungles. The harvested material should be distilled as quickly as possible.

5. Distillation of fresh leaves.—It should be carried out as rapidly as possible and with steam of slightly higher pressure. To avoid saponification of the esters, the steam should not be permitted to condense and condensed water should not accumulate

inside the still. The condenser should be large and efficient enough to permit rapid distillation.

Handling of the Oil

The producers sell their small lots of oil to field brokers and shop owners, many of them Armenians, in the nearest villages, where the oil is packed into small drums or gasoline cans and transported to the exporters in Asuncion. Shipping from the interior usually takes time because of the very poor roads in Paraguay. In fact, many of the roads are just mud tracks deeply furrowed by the heavy, two wheeled ox carts, and during rainy weather these roads frequently become mud traps. For this reason, the exporters in Asuncion are sometimes cut off for weeks from their suppliers and temporarily prevented from filling their contracts abroad.

The exporters examine every small lot of oil for solubility and specific gravity in their primitive "laboratories," which consist of a few glasses, test tubes and a Westphalian scale. Small lots, found normal by this preliminary examination, are bulked into larger lots, samples of which are sent to the Government analyst of Asuncion. Thus, standardized shipments with certain constants are made up, each exporter specializing in his own brand. The bulked oils are finally shipped abroad. Those going to Europe are packed in wooden cases of eight cans, each can holding five kilos of oil, while the shipments to the United States and Japan consist also of cases of eight cans but each can holding eleven pounds of oil.

The Physical and Chemical Constants

The constants of the shipments exported from Paraguay vary between relatively narrow limits because all the shipments represent bulkings of many small lots.

The oils should be slightly laevo-rotatory, dextro-rotation indicating some distilled peel oil due to the presence of small fruit in the leaf material. The oils should be soluble as follows:

One volume of oil in 0.8 volumes of 80% alcohol.

One volume of oil in 2.5 volumes of 70% alcohol.

Inferior solubility might indicate the presence of peel oil, especially when it coincides with slight dextro-rotation; or it might indicate the presence of kerosene which is sometimes added as an adulterant by the small producers and especially by the intermediaries.

Shipments of oils which we received during the last four years varied between the following limits:

Specific Gravity at 15° C:	0.887 to 0.891
Optical Rotation:	−0°45′ to −2°33′
Refractive Index at 20° C:	1.4598 to 1.4622
Ester Content (calculated as linalyl acetate):	43.8% to 53.9%
Solubility:	Soluble in 2 volumes of 70% alcohol but sometimes slightly hazy in 5 to 6 volumes of 70% alcohol.

Pure oils may contain less than 43 per cent. ester, calculated as linalyl acetate, but the quality of Paraguay petitgrain oil is mainly evaluated by the ester content, which ranges in the best oils from 45 to 50 per cent. and even higher.

The content of linalool varies between 35 to 55 per cent.

Chemical Constitution

The chemistry of petitgrain oil has been described in detail.[1]) Thus, it is sufficient to enumerate here the various compounds identified so far in this oil:

pyrrol
furfural
camphene
β-pinene
dipentene
limonene—(It is claimed that oil of petitgrain, when distilled exclusively from leaves and twiglets, contains no limonene, the presence of which would indicate small fruit in the distillation material.)
l-linalool and linalyl acetate (the two main constituents)
d-α-terpineol
nerol
geraniol and geranyl acetate
methyl anthranilate (probably)
sesquiterpenes (not yet fully identified)

Terpeneless Petitgrain Oil

Oil petitgrain Paraguay is a very important base for synthetic neroli or orange blossom scents and, because of its pronounced odor, lends itself especially well for soap work or for other preparations where strength and low price are of prime consideration. However, in handkerchief perfumes, eaux de Cologne, lotions and cosmetics, where a more delicate note is desired, the regular oil should be replaced by the so-called terpeneless petitgrain oil which is prepared by eliminating from the original oil most of the terpenes.

Terpeneless petitgrain oils of own manufacture showed, during the last five years, the following constants:

Specific Gravity at 15° C:	0.892 to 0.896
Optical Rotation:	−1°28′ to −2° 35′
Refractive Index at 20° C:	1.4586 to 1.4608
Solubility at 20°C:	Soluble in 2 to 3 volumes of 70 per cent. alcohol and more.
Ester Content, calculated as linalyl Acetate:	49.7% to 60.4%

Terpeneless petitgrain oil is one of the most interesting perfume raw materials. Not only a base par excellence of synthetic neroli oils, its scent is full and rich, smooth and harmonious. These features, in conjunction with its moderate price, offer a wide range of application in many fields of the perfumer's art.

[1]Gildemeister & Hoffmann, *Die Atherischen Ole*, Third Edition, Vol. III, p. 146.

MERCHANDISING NEWS and PACKAGING NOTES

PROPHETIC PACKAGING PICTURE: We thought you would like to know that a symposium of members of the American Management Association's Packaging Council forsees "an increase in the use of small unit packages . . . In pharmaceutical supplies, where unit dosage is desired" as part of its "clear prophetic picture of packaging of the future." Although a member of the Packaging Council, we were unable to participate in the symposium so that we are free to point with pride to the fact that we first plugged for the unit dose container in these pages in February 1935. At that time we pointed out that packages of this kind for medicinal products would not only open up new markets but, as purveyors of measured doses, also provide a scientifically sound and ethically proper merchandising basis for the small size package. Since that time, of course, there have been several outstanding examples of packaging of this type by members of this industry, about the first of which was the Vitalis package introduced in 1936 and the most recent of which is the Alka-Seltzer package of 1940.

The Packaging Council's symposium was carried on in connection with organization and program activities of the 1941 Packaging Exposition and Conference, to be held at the Stevens Hotel, Chicago, April 1 to 4. Among the other packaging developments which the council foresees for the future are:

"The rise of transparent packaging to a dominant position, particularly in the direction of visible windows and open tops for opaque packages, and the development of new transparent packaging materials of significant properties.

"A greatly increased use of plastic materials of all types, both transparent and opaque, providing plastic containers for a broad range of products now restricted to metal and glass, with the plastics milk bottle a probability within ten years. Also, the development of automatic machinery to make boxes and packages from rigid transparent plastic sheets and the concurrent development of an absolutely moisture-proof plastic sheet, making for broad utility of this type of container.

An increased use of thermoplastics, both as an adhesive and a coating, providing many new functional as well as decorative characteristics.

"An increasing simplification of packages, with heightened use of modern design and bright and unusual color combinations, better printing and lithography.

"An increase in the use of small unit packages inside of the larger, regular package, particularly in foods where freshness is a primary consideration and, in pharmaceutical supplies, where unit dosage is desired; but, concurrently, in other fields, a greater use of bulk packages for economy prices.

"Progress in packages and packaging material that will be easier for the consumer to use, especially in the matter of means of making packages easier to open, and, once opened, of maintaining the original condition of the product.

"The greater use of two-fold packages and utility packages that will serve some actual use in the home after having served as a container for a given product."

THE COSMETIC TREND: Following an otherwise uneventful year toilet good sales rose rapidly with the arrival of the winter season and there is every prospect now that the advance will be carried into 1941. The outlook certainly is much more satisfactory than twelve months ago. Most of the troubles that beset manufacturers and buyers, including that of foreign supplies, have been ironed out in the meantime and the $9,000,000,000 increase in the nation's income, forecast for the coming year, should do the rest. Buyers generally work now on the theory that the European war will last another year at least and that purchasing power, now created by our own armament efforts, will continue over a number of years even if peace should suddenly come abroad. While prospects for 1941, therefore, are good this does not mean essentially that the cosmetic industry can sit back and wait for customers. The question for the individual manufacturer is not how much he will do in 1941, but to what use he will put his undeniably great current opportunities to last him through the lean years, that are bound to follow once the present upward swing has ended. Many cosmetic

firms who rose to prominence during the boom years of the last war did not maintain their advantage because they failed to follow up their first success with a course of determined business building. It is to be expected, therefore, that manufacturers will look to the future as well as the present, do more advertising, broaden assortments, reach out for new and wider groups of consumers. They will have the full support of the department stores in this respect, because these too today realize the need of a broader appeal of their counters.

While every effort will be made to retain present retail prices it is too much to expect that manufacturers will be able to maintain production costs at current levels. It may be possible, however to absorb part at least of the rising material and overhead cost by centering sales efforts upon larger packages. These have been received very favorably during the Christmas sales. Stores generally will cooperate although they do not deny the educational value of the small package in view of the many new customers who now come to their counters.

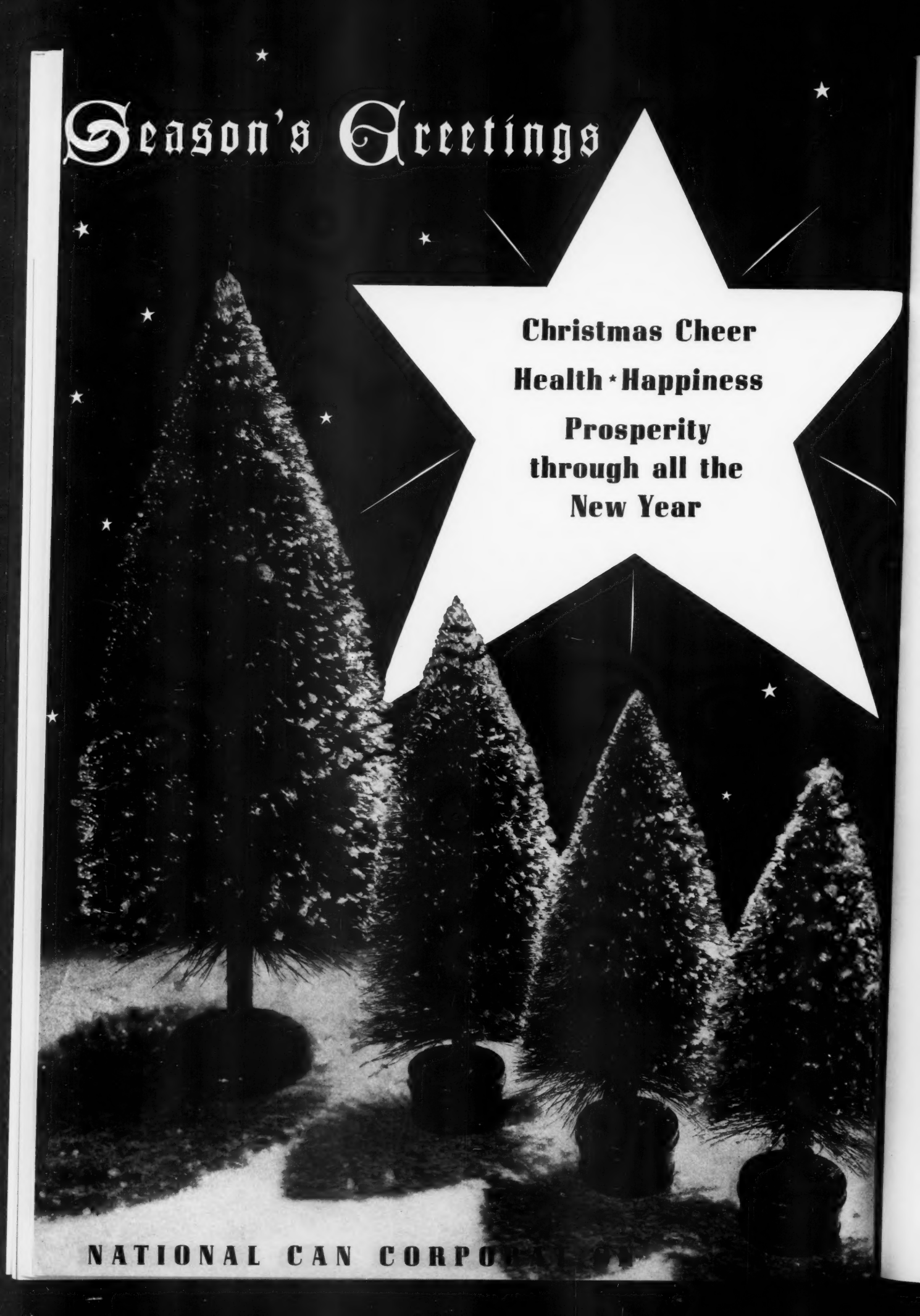
Fashion trends are still not well defined. The market is growing horizontally. Fashionable and individual peaks may develop later but the strong upsurge of new customers from the below-medium income groups will make them less noticeable than in normal years.

WHAT TYPE AM I?: Woodbury presents its new color controlled facial powder, harmonized and matched to skin types. Edyth Thornton McLeod, cosmetic lecturer was asked by Woodbury to find types to match the five Hollywood glamor stars and to test Woodbury powders on as many types as she selected. According to Miss McLeod, women ask "How can I know my type so that I may choose the correct shade of powder? What shall I use as a standard by which to judge my own type of skin coloring?" The Woodbury answer is "Judge your skin type by the stars chosen by Hollywood's great directors as the perfect examples of the five important skin types." Miss McLeod went out looking for these five skin types and found them in women and girls who are exactly the skin types of the five Hollywood stars used as the symbols of the search. They are: Virginia Bruce—fair skin with cameo pink tints; Brenda Joyce—honey skin blonde, tawny skin with gold tints; Myrna Loy—American beauty blend, blonde and brunette blend, warmer than fair skin, with peach undertones; Merle Oberon—ivory skin brunette; creamy skin with ivory tints, and Delores del Rio—tropic skin brunette, vivid skin with dusky undertones. According to these classifications any woman may study her skin in her mirror and know whether or not she is a certain type, typified by these stars. Miss McLeod says, "It was exciting testing powder on girls and women chosen for skin type, which is definitely the way to choose face powder. I conducted tests under artificial light, in the hard light of day and under the trying lights of evening. There is a shade for each of the five types, one to match exactly and there is a second shade to add new glamor and new personality."

This is the fundamental copy slant on the Woodbury powders as proposed for 1941.

ADVERTISING ART: The effectiveness of art and design in cosmetic advertising and promotion was strikingly illustrated at a display of the elements entering into the campaign on "Mais Oui" by Bourjois, held in the Art Gallery of Pratt Institute, Brooklyn, the week beginning December 9, 1940. The occasion was a one man exhibit of work by Robert L. Leonard, well-known advertising designer. The illustration here is of a window display which was part of the exhibit but also included were the packages, the advertising, the booklets and the counter and other displays which entered into the merchandising program on "Mai Oui."

"FINGERTIP-FIDGETS": The new advertising theme for Revlon nail enamel is "Fingertip-Fidgets." What is meant by "Fingertip-Fidgets?" Revlon describes them as the nervous gestures of an otherwise perfectly-groomed woman when she suddenly discovers that her nail polish is chipped, or that the shade is not quite right. The copy goes on to point out that women need not suffer from "Fingertip-Fidgets" and lose their poise at critical moments if they wear Revlon. The entire copy theme is handled in a light vein with illustrations by Gilbert Bundy. The ads are interesting, amusing and should be helpful in answering customers' inquiries on "Fingertip-Fidgets."


Season's Greetings
Christmas Cheer
Health • Happiness
Prosperity
through all the
New Year
NATIONAL CAN CORPO

THE "5 & 10" BEST PACKAGES: For the eighth successive year the Syndicate Store Merchandiser has announced the winners of its annual packaging contest for "5 & 10" cent store products. While packaging progress in cosmetics generally has been impressive during that period, this year's 10-cent store winners certainly indicate that the most startling advances are in that mass market field. Of course, the chief amazement is the fact that the manufacturers supplying that field can turn out products packaged like these to sell for only 10 cents, although it must be confessed that in some cases the 25 cent limit helps.

In any case, the winners this year include the following. In the cosmetic classification, the American Way powder box by A. A. Vantine won first prize for greatest counter display value, with Luxor Lipstick and Rouge winning honorable mention. The Waxy Protector nail polish and polish remover by A. Sartorius & Co. won the first prize for best use of materials, while another manicure line, Pledge, previously commented upon here, won first prize for greatest merchandising value gained from packaging design.

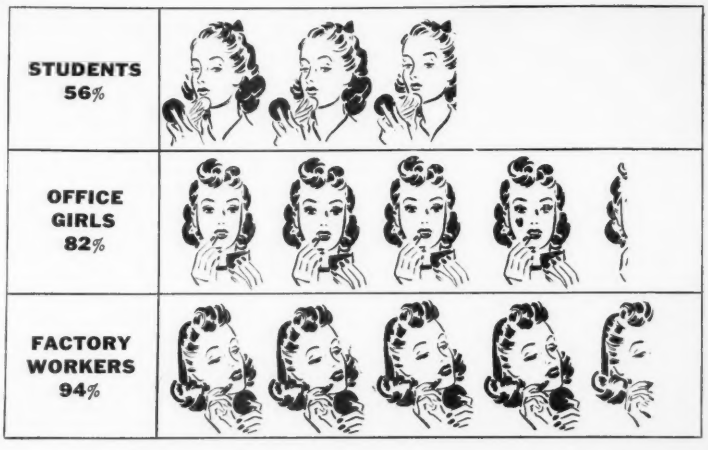
F. W. Fitch's wave set won first prize in the toilet goods division for best use of materials. Pickwick Cosmetic Corp. won first prize in the same classification in the special holiday goods division with its Lace Metal Basket, while Garb-O-Beauty's gift bath salts took first prize in holiday goods for greatest merchandising value gained from packaging design. Miniatures by Surlin, manufactured by Hirsch Laboratories was awarded first prize in novelties and miscellaneous for best use of materials.

COLOR AFFILIATES PROMOTION: The Color Affiliates group remains the same, i.e., G. Howard Hodge, hats; Koret, bags; Kislav, gloves; Delman, shoes; Paler DeLiso, shoes; Mallinson, silks and rayons; Stroock, woolens; Elizabeth Arden, cosmetics. Seven colors, keyed to Latin-America, have been chosen for the 1941 Spring promotion. The color names are: Trinidad Tan (soft brown); Brazilian Beige; Argentine Navy; Chile Sauce (red); Lima Lemon (sharp yellow); Bogota Blue (rain-washed blue); Peruvian Pink (pale adobe pink). For the first time the colors will be pivoted around a key shade—Trinidad Tan. Color Affiliates has grouped the shades into three distinct types—neutrals, sharp tones and pastels. The colors were introduced to the press and public at a showing on January 14. Elizabeth Arden has created a series of four special Color Affiliates make-ups to harmonize with the various color combinations and based on Liquid Bronze Glo and Liquid Bronze rouge. These cosmetics are to be packaged in a special kit containing powder, lipstick and eye shadow and the liquid bases. The box cover carries out the Latin American theme with a sketch in several typical colors.

CLAY COATED STORY: One of the most effective presentations of the clay coated paperboard story we have ever seen has been turned out by Container Corporation of America. Its title is "Consumer Meets Package" and it makes it easily and immediately apparent why drug and cosmetic manufacturers who insist upon good looking folding cartons start with clay coated board. It is interesting to note, too, that the only manufacturers singled out for special mention in this booklet, are those who package perfumes and cosmetics. The copy reads, "Packages such as those containing cosmetics and perfumes should appeal to the desire for daintiness and beauty. These may be decorated with delicate designs and colors, or the same impressions may be given almost entirely by the texture or "feel" of the board."

Vanity in the East wears a mask of SCOVILL METAL

Surveys conducted recently in New York and Pennsylvania . . . among 712 women . . . students in a leading women's college . . . office girls in a large insurance company . . . and workers in an important manufacturing plant . . . showed that over 85% use lipsticks and vanities made by manufacturers who have come to Scovill for one or more items in their lines.



WHY SUCCESSFUL COSMETIC FIRMS COME TO SCOVILL FOR DESIGNS IN METAL

Economical, high-quality production . . . the cooperation of Scovill stylists . . . the pioneering of new sales-building designs and finishes on metal and metal-plastic combinations—these are the reasons why the cosmetic firms who come to Scovill account for well over half of the nation's sales. Recently popular Scovill developments have been multi-color reproduction on metal . . . and beautiful, mar-resistant "Indurite" finish on aluminum.

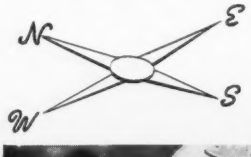
Why not call us in, from the nearest office listed below, to discuss new developments in containers and closures in relation to your own problems. Scovill Manufacturing Company, Drug and Cosmetic Container Division, 69 Mill Street, Waterbury, Connecticut.

Masters of Metal

Scovill

MANUFACTURING COMPANY

WATERBURY, CONN.



Everybody will be at the Drug, Chemical and Allied Trades Banquet at the Waldorf-Astoria on March 13 . . . will you? Make your reservations now!

NORTH, SOUTH, EAST AND WEST . . .
SCOVILL CONTAINERS ARE SELLING BEST

Boston, Providence, New York, Philadelphia, Syracuse, Pittsburgh, Chicago, Cincinnati, San Francisco, Los Angeles
IN CANADA: 334 King Street, East, Toronto, Ontario

YARDLEY

Yardley is featuring English Lavender and Bond Street toilet water in a new six ounce bottle. The novel atomizer has been designed for one-hand operation. Simply grasp the chunky round, corrugated bottle, press the spring top of the atomizer, and the result is an adequate but economical spray.

YARDLEY

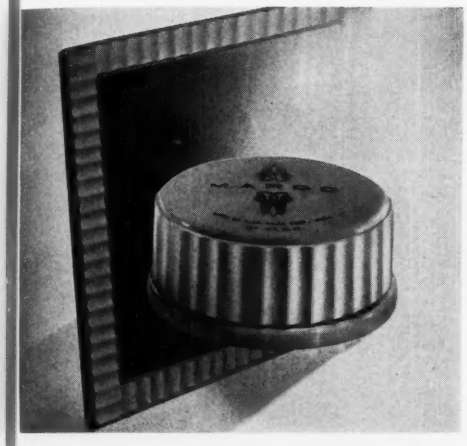
DELETTREZ

Delettrez has introduced a new perfume which is called "Fulfillment." This is a dramatic fragrance, handsomely bottled and packaged. It is available in one size only—1½ ounce bottle.

DELETTREZ

ELMO

Elmo's Margo face powder makes its appearance in a sculptured boudoir container. The screw-top plastic container has feminine appeal. Tinted a soft shell-pink with delicate sea-blue tracery on the cover, it makes a handsome and practical dressing table accessory. Available in brunette, beige, nude, dark brunette, peach, sun peach, pastel, Navajo, and the new deep sea shade, Sea Nymph.



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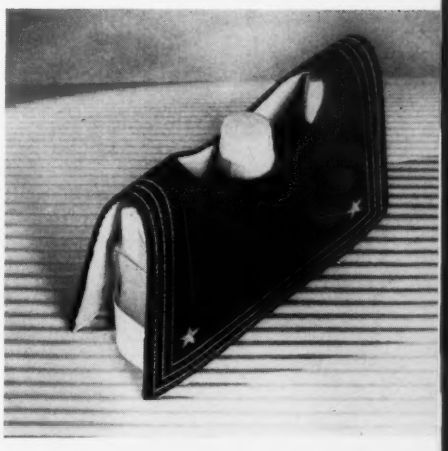
Revlon's "Middy Collar," a clever nail kit, inspired by the collar worn by midshipmen, will be introduced on January 19. It holds nail enamel, remover and a bottle of new-type Adheron now containing cholesterol. The kit comes in navy or red.



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Esme of Paris offers a collection of perfumes which includes Sea Lady, Lady in Black, Green Eyes, a May Morning, and others. The latest number to be added to the line is the "Ballet" package, a perfumed cologne in a plaster case. Refills are available for this case which makes an attractive dressing table accessory.

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Milk Maid is responsible for a luxurious Milk Maid Foam Bath which is said to be made of 70 per cent. pure whole dehydrated milk. A short time ago this company introduced a complexion cleansing cream which it claims is made of 80 per cent. whole pasteurized milk. In keeping with the dainty Milk Maid cleansing milk packages, the Foam Bath is contained in an 8 oz. crystal milk pail that is complete even to the handle. The pail is decorated with little painted blossoms of pink and blue. The silvery measuring shovel, which accompanies it has a colorful sprig of artificial flowers attached.

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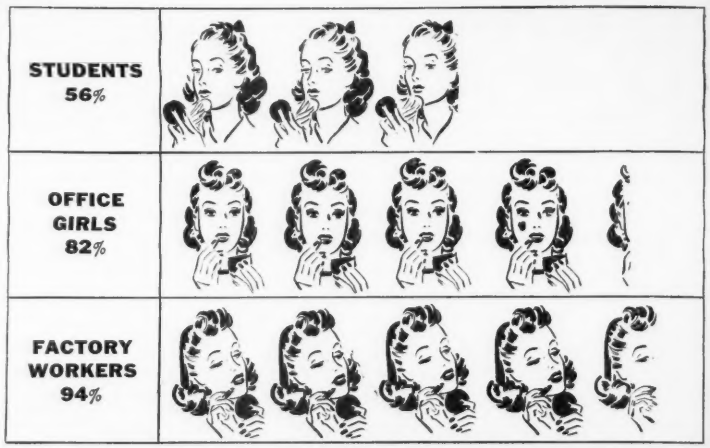

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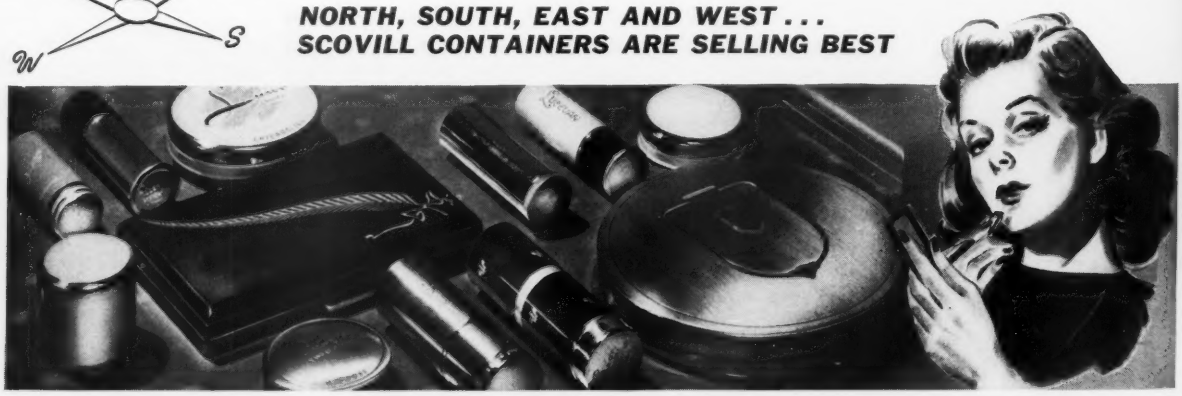

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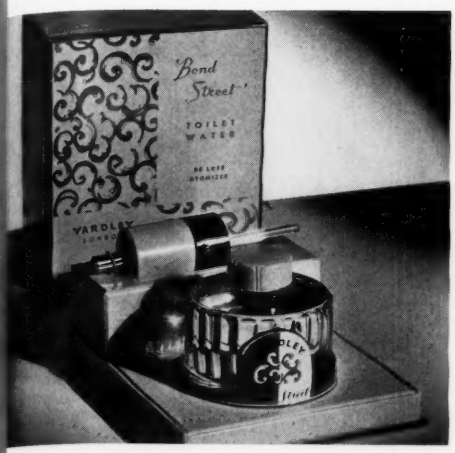

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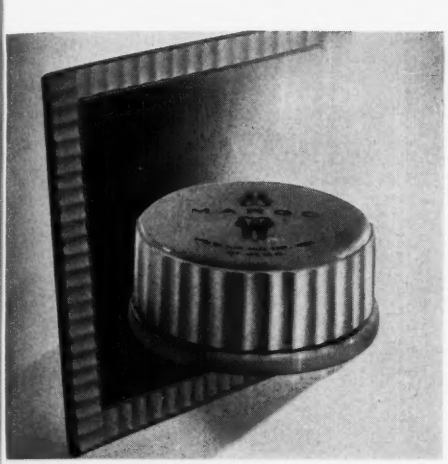

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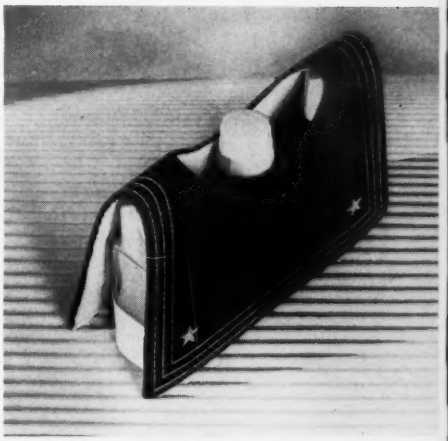

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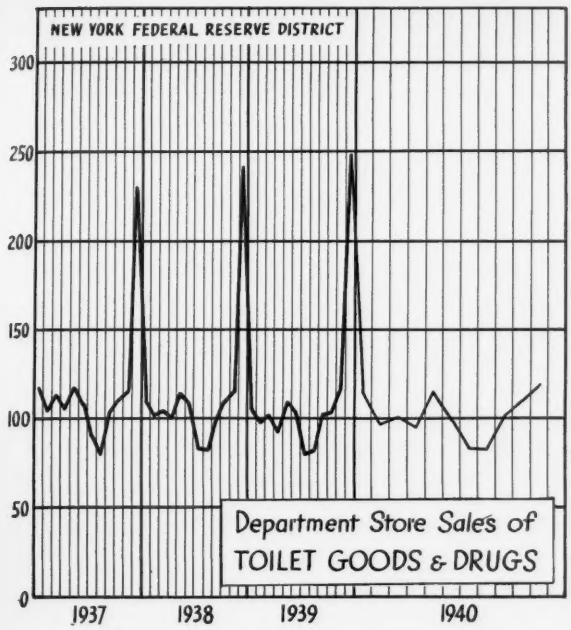
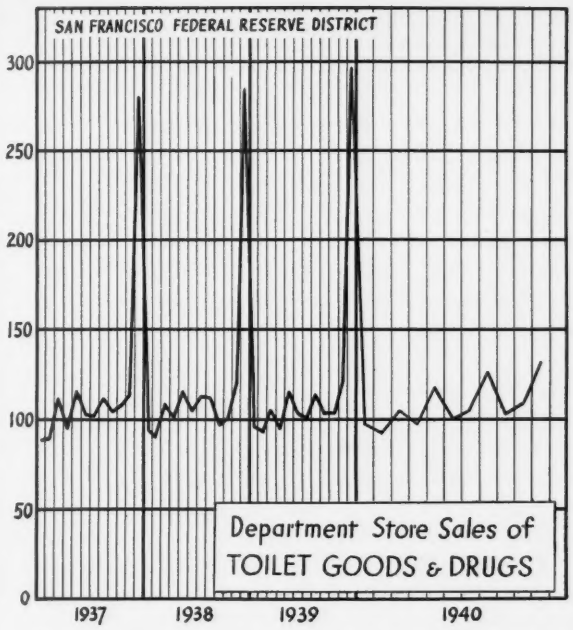
MILK MAID

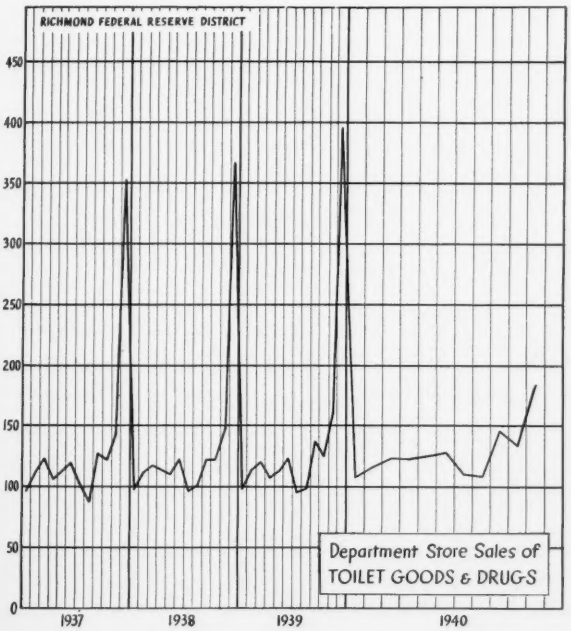
Parade of STOCK Bottles
Drawn up for inspection are eight of the many attractive Swindell bottles that can be supplied from stock, making it possible for you to enjoy the sales advantages of smart packaging without a heavy investment in bottles.
BACK ROW (left to right)
C-39: ½ oz. to 16 oz.
D-62: ½ Dram to 8 oz.
A-273: ¼ oz. to 16 oz.
A-347: 1¼ Dram to 8 oz.
FRONT ROW (left to right)
J-32: ½ oz. to 16 oz.
A-539: ½ oz. to 32 oz.
A-415: 1 oz. to 4 oz.
A-682: ⅛ oz. to 4 oz.
SWINDELL BROS.
BALTIMORE • MARYLAND
Latin American Representative
MR. ROBERTO ORTIZ, HAVANA, CUBA
200 FIFTH AVE
NEW YORK
When you think of bottles think of
Swindell



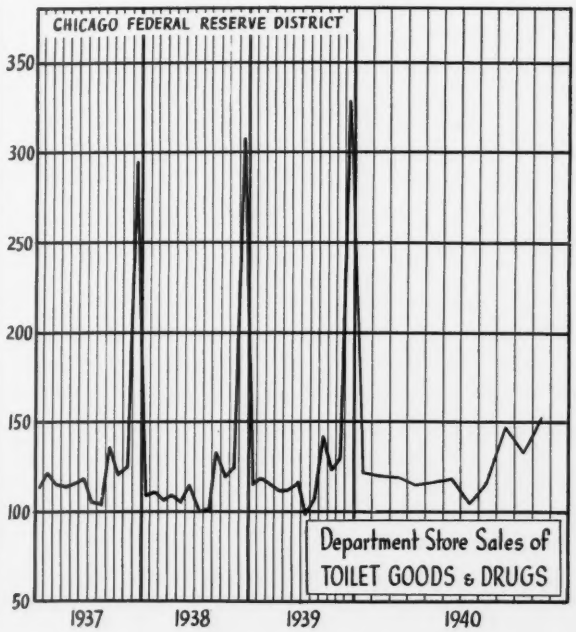
The unadjusted index of sales of toilet articles and drugs by department stores in the New York Federal Reserve District was 119.0 in November 1940, compared with 109.7 in the preceding month, and 116.4 for November 1939. Actual sales for November 1940 were 2.2 per cent. greater than in the previous year.



The unadjusted index of sales of toilet articles and drug sundries by department stores in the San Francisco Federal Reserve District was 132.3 for November 1940, 109.4 for October 1940, and 121.4 for November 1939. Actual sales were 10 per cent. greater in Los Angeles, 8 per cent. greater in San Francisco, 12 per cent. greater in the stores of the Pacific Northwest, and 9 per cent. greater for the whole district in November 1940 compared with November 1939.



The unadjusted index of sales of toilet articles and preparations by department stores in the Richmond Federal Reserve District was 183.8 for November 1940, compared with 133.5 for October 1940, and 159.8 for November 1939. Actual sales for November 1940, compared with November 1939, were 17 per cent. greater in Baltimore, 13 per cent. greater in Washington, and 15 per cent. greater for the whole district.



The unadjusted index of sales of toilet goods and drugs by department stores in the Chicago Federal Reserve District was 152.8 for November 1940, compared with 133.5 for October 1940, and 130.9 for November 1939. Sales were 16.7 per cent. greater in November 1940 than in the same month of the previous year.

Stability of Perfume Composition

(*Continued from page 24*)

Oil	*Limit Price Sept./39*	*Limit Price Dec./40*	*Spot Supply*
Jasmin	223.00	550.00 (Nominal)	
Jonquil	295.00	Unobtainable	
Mimosa	35.00	Unobtainable	
Rose	65.00	200.00*	Scarce
Tuberose	300.00	425.00*	Very scarce
Violet Leaves Incolore	125.00	Unobtainable	
Castoreum	200.00	Unobtainable	
Civet (Absolute)	210.00	600.00*	
Opoponax Incolore	22.00	Unobtainable	
Toul Incolore	10.50	14.50*	
Violet Leaves Green	70.00	Unobtainable	

*No real market price—quotations nominal.

Aromatic Chemicals and Derivatives

Chemical	*Price Sept./39*	*Price Dec./40*
Aldehyde C-8	$18.00 lb.	$16.50 lb.
Alpha Amyl Cinnamic Aldehyde	1.65 lb.	1.40 lb.
Amyl Phenyl Acetate	3.75 lb.	3.75 lb.
Amyl Salicylate	.50 lb.	.54 lb.
Anisic Aldehyde	2.60 lb.	2.45 lb.
Benzophenone	.95 lb.	.86 lb.
Benzyl Acetate	.60 lb.	.60 lb.
Benzyl Alcohol	.65 lb.	.65 lb.
Benzyl Benzoate	.82 lb.	.82 lb.
Benzyl Propionate	1.90 lb.	1.90 lb.
Beta Naphthol Ethyl Ether	1.60 lb.	1.35 lb.
Bornyl Acetate	1.65 lb.	1.65 lb.
Cinnamic Alcohol Synthetic	2.75 lb.	2.35 lb.
Cinnamic Aldehyde	1.55 lb.	1.40 lb.
Cinnamyl Acetate	6.30 lb.	6.30 lb.
*Citral	1.60 lb.	2.60 lb.
*Citronellol	1.50 lb.	1.70 lb.
*Citronellyl Acetate	4.15 lb.	3.10 lb.
Coumarin	2.75 lb.	2.75 lb.
Dimethyl Benzyl Carbinol	15.00 lb.	16.50 lb.
Diphenyl Oxide	.55 lb.	.55 lb.
Ethyl Phenyl Acetate 5 lb.	2.35 lb.	2.35 lb.
*Eugenol	2.00 lb.	2.10 lb.
*Geraniol	1.20 lb.	1.45 lb.
*Geranyl Acetate	1.30 lb.	1.45 lb.
*Geranyl Formate	3.15 lb.	3.15 lb.
*Geranyl Propionate	3.50 lb.	3.85 lb.
*Heliotropine	2.25 lb.	3.25 lb.
*Hydroxycitronellal	2.10 lb.	2.35 lb.
*Hydroxycitronellal Di Methyl Acetal	3.85 lb.	3.65 lb.
Indol	29.00 lb.	36.00 lb.
*Ionone	1.80 lb.	2.95 lb.
Iso Bornyl Acetate	.95 lb.	.95 lb.
Iso Butyl Benzoate	2.70 lb.	2.70 lb.
*Iso Eugenol	2.75 lb.	3.10 lb.
*Linalool	2.40 lb.	3.60 lb.
*Linalyl Acetate	3.50 lb.	4.50 lb.
Methyl Acetophenone	1.45 lb.	1.45 lb.
Methyl Anthranylate Domestic	2.60 lb.	2.60 lb.
Methyl Benzoate	1.10 lb.	1.10 lb.
Methyl Eugenol	4.00 lb.	3.20 lb.
Methyl Heptine Garbonate	18.50 lb.	20.25 lb.
Methyl Napthyl Ketone	2.95 lb.	2.65 lb.
Methyl Paracresol	1.80 lb.	1.80 lb.
Methyl Phenylacetate	1.30 lb.	1.30 lb.
Musk Ambrette	3.25 lb.	3.60 lb.
Musk Ketone	3.40 lb.	3.75 lb.
Musk Zylene	1.00 lb.	1.10 lb.
Phenyl Acetaldehyde	5.10 lb.	4.65 lb.
Phenyl Acetaldehyde di Methyl Acetal	5.55 lb.	5.55 lb.
Phenyl Ethyl Acetate	2.30 lb.	2.30 lb.
Phenyl Ethyl Alcohol	2.30 lb.	2.30 lb.
Phenyl Ethyl Propionate	5.50 lb.	4.35 lb.
Phenyl Propyl Alcohol	3.00 lb.	3.60 lb.
Phenyl Propyl Aldehyde	5.40 lb.	5.60 lb.
*Rhodinol	11.00 lb.	33.00 lb.
Styralyl Acetate	2.95 lb.	2.95 lb.
Terpineol	.35 lb.	.38 lb.
Terpinyl Acetate	.90 lb.	.93 lb.
Vanillin (Clove)	2.65 lb.	2.65 lb.
Vanillin Ethyl	6.15 lb.	6.15 lb.
*Vetivert Acetate	24.00 lb.	26.00 lb.
Yara Yara	1.50 lb.	1.50 lb.

*Dependent upon imported raw materials.

Sources of Perfume Ingredients

(*Continued from page 28*)

HOLLAND

Caraway Oil
Dill Oil
Caraway Seed
Dill Seed
Also many essential oils distilled from imported raw materials.
Furthermore, a great variety of isolates and synthetics.

GERMANY

Oil Angelica Root
Oil Angelica Seed
Oil Chamomile German
Oil Lovage
Oil Mustard Synthetic
Oil Amber
Oil Cognac
Many essential oils distilled from imported raw materials such as Cinnamon, Cardamom, Clove, Nutmeg and so forth.
Furthermore, a great variety of isolates and synthetics.

AUSTRIA (TYROL)

Oil Pinus Pumilio
Oil Pinus Sylvestris
Oil Abies Alba, including Templin Oil
Oil of Savin
Oil of Juniper Berries
Pine Needle Extracts

SWITZERLAND

Oil Templin
Pine Needle Extracts and a great variety of isolates and synthetics

YUGOSLAVIA

Oil Sage
Oil Rosemary
Oil Helichrysum
Oil Juniper Berries
Pyrethrum
Oak Moss
Juniper Berries

HUNGARY

Oil Dill Seed
Oil Dill Weed
Oil Chamomile German
Oil Lavender
Oil Coriander
Capsicum

CZECHOSLOVAKIA

Oil Juniper Berries
Juniper Berries
Fennel Seed
Hops

BULGARIA

Oil Rose
Oil Peppermint

TURKEY

Oil Rose
Styrax

RUSSIA

Siberian Pine Needle Oil
Oil Coriander
Oil Anise
Coriander Seed
Anise Seed

ADMINISTRATIVE PROBLEMS

FULLER INFORMATION REGARDING SOME OF THE IDEAS of the Food and Drug Administration regarding enforcement of the Food, Drug, and Cosmetic Act has been revealed from reports of the annual meeting of the enforcement chiefs held in Washington the latter part of December. Firstly, we give a list of products which cannot be distributed for use even by physicians: Dinitrophenol, dinitrocresol, diethylene glycol, ethylene glycol, Carbitol, Cellosolve, all other glycols and glycol derivatives except glycerine and propylene glycol, lead nipple shields and devices, nasal devices which may force the infection back into the accessory sinus or eustachian tube.

PRODUCTS CONSIDERED DANGEROUS FOR SELF-MEDICATION and therefore to be sold only for use under a physician's direction are:

Aminopyrine
Aconite (internal)
Bust Developers
Benzedrine Sulfate Tablets
Cantharides (internal)
Causalin
Chrysophanic Acid
Chrysarobin
Cincophen, Neocincophen
Colchicum
Colchicine
Ear Pumps
Emitine
Ipecac
Phosphorus
Phosphides
Sulfanilamide
Sulfapyridine
Sulfathiazole
Sedormid
Stem Pessaries
Thiocyanates
Thyroid
Radio Active Drugs
Rectal Dilators
Diathermy Machines

DOSAGE LIMITS OF TEN GRAINS PER DAY have been set by the FDA for acetphenetidin and antipyrine. Strychnine preparations are to be limited not more than one-twentieth of a grain of strychnine per twenty-four hour period. Epinephrine solutions are not to be stronger than ten per cent.

Acetanilid preparations are limited to two and one-half grains per single dose, which may be repeated after three hours, but not more than two doses are to be taken within twenty-four hours. Bromide preparations are limited to fifteen grains in a single dose, which may be repeated after three hours, with not more than two doses within twenty-four hours. Acetanilid-bromide combination products are limited to two and one-half grains of acetanilid and fifteen grains of bromide per single dose, which may be repeated after three hours, with not more than two such doses in twenty-four hours.

Bleach creams are not to contain more than five per cent. of ammoniated mercury or 0.2 per cent. of bichloride of mercury.

THE ENFORCEMENT PROGRAM OF THE FDA FOR 1941 includes careful checking of all drugs for impurities, checking of ampules, cotton bandages and other products that are supposed to be sterile, as well as sanitary inspection of plants, and inspection of labels with particular emphasis upon adequate directions for use and proper warnings.

Proprietary preparations are to be carefully checked as to claims made, and it is understood that vitamin preparations are to receive extremely careful consideration. Economic violations of the law, such as misleading containers, short weight or volume, and substitution of ingredients will receive greatly increased attention.

FROM THE APPEARANCE OF THINGS A TOUGH YEAR of enforcement is ahead for manufacturers in this industry. The FDA is apparently going to try out enforcement of various phases of the new law to see just how far it can go. After all, the law is quite new and the enforcement officials are going to find out if the courts will sustain the law in the manner in which the officials believe that Congress intended the law to be applied.

The FDA is going after those who are attempting, in their labeling, to write around statements which are forbidden. Attempts to convey a forbidden meaning by the use of a lot of words will not go, if forecasts of this year's enforcement of the act are any indication.

GLYCEROPHOSPHATES

Monsanto pharmaceuticals have a reputation for quality and dependability. That is why leading pharmaceutical manufacturers throughout the country call on Monsanto repeatedly to supply their requirements.

The *glycerophosphates* are one type of the many Monsanto products used by the pharmaceutical industry. For information concerning specifications and prices of these or other Monsanto pharmaceuticals, inquire: MONSANTO CHEMICAL COMPANY, St. Louis, U. S. A.

MONSANTO GLYCEROPHOSPHATES

Calcium N. F.
Iron Powder N. F.
Magnesium
Manganese N. F.
Potassium (75% Solution)
Sodium Pure Crystals N. F.
Sodium Pure Powder N. F.
Sodium 50% Solution
Sodium 75% Solution
Glycerophosphoric Acid

MONSANTO CHEMICALS
SERVING INDUSTRY . . . WHICH SERVES MANKIND

F.T.C. ACTIVITIES

Complaints

Thomas Hair Treatment

The Thomas Management Corp., the Paul A. Thomas Trust and six individuals, all of Chicago, distributors of cosmetics and medicinal preparations for the hair and scalp, were charged with misrepresentation. The individuals were Paul A. Thomas Sr., Catherine M. Thomas and Norbert J. Thomas, officers of the corporation and trustees of the trust; Paul A. Thomas Jr., officer of the corporation; and Ruth and Madeline Thomas.

The complaint avers the respondents sell preparations for external use through extensive advertising to the effect that they can diagnose and cure scalp trouble, stop falling hair, and regrow hair, inducing persons to come to their places of business where the various preparations are administered and sold; and sell "home treatment kits" containing the same cosmetic preparations.

The complaint charges that the "products do not constitute a cure or remedy for dandruff or an effective treatment for dandruff or itching scalp in excess of furnishing temporary relief from symptoms of itching and the temporary removing of dandruff scales; that the preparations, while having some therapeutic and germicidal qualities, will not destroy the germ which allegedly causes dandruff; that the preparations have no therapeutic properties effective in causing new hair to grow; that their use will not stop the abnormal loss of hair or promote normal hair growth, and that the preparations have no therapeutic value in treating baldness.

The respondents are alleged further to represent that the internal use of their preparations "Trichovita" and "Trichotone" are effective in stimulating hair growth, when such are not the facts.

Cinchona Products Institute

Cinchona Products Institute, Inc., New York, is charged with misrepresentation.

The respondent is a wholly-owned subsidiary and American agent and representative of the Cinchona Institute of Amsterdam, Holland, a foreign corporation engaged in distribution in the United States and elsewhere of quinine.

As the agent of the Holland concern, the respondent has for more than two years disseminated advertisements with respect to its principal's product, recommended by the respondent and the Holland concern, for malaria. In these advertisements in newspapers, periodicals and other media, the respondent is alleged to have represented that "Quinine is the only cheap, safe and certain remedy" and " * * * the only dependable treatment for malaria is quinine * * *."

The complaint alleges that these representations are false and misleading, and that, while quinine possesses therapeutic value in the treatment of malaria, it is not effective in all cases and is not in all cases safe for use, as it may cause in some cases toxic conditions manifested by skin rashes, ringing in the ears, and dizziness. According to the complaint, the use of quinine by women in the latter stages of pregnancy may precipitate miscarriage. Quinine is not, the complaint continues, the only treatment for malaria which is inexpensive and dependable, there being other drugs and medicinal preparations which constitute dependable treatments for malaria and which are inexpensive.

The respondent further represents, the complaint continues, through use of the word "Institute" in its corporate name and by other representations, that it is a nonprofit organization whose purpose is the promotion of learning and research. In truth, the complaint alleges, the respondent is a commercial enterprise whose sole purpose is the promotion of the sale of its principal's product.

Herolin Claims Cited

The Commission has issued a complaint against Herolin Company, Inc., and Bert H. Rubin, its president, Atlanta, alleging misleading representations of various cosmetics and medicinal preparation, "Mystic Charms," toilet articles and related items.

The respondents made misleading representations concerning "Original Herolin Beautifier Hair Dressing," "Herolin Tetter Salve," "Herolin Blood Tonic," Herolin Moonbeam Tonic," and other cosmetic and medicinal preparations.

According to the complaint, the respondents advertised "Lucky Charm Mystic Curios," "Lucky Charm Mon Jon Incense," "Magnetic Lodestone in Love Oil," and other items, as having mystic and supernatural powers to drive off evil spirits and bring luck and success.

The complaint alleges that the respondents' cosmetic or medicinal preparations do not generally accomplish the results claimed, although some of the latter may give temporary relief.

The complaint further alleges that the respondents disseminated false advertisements because they failed to reveal therein that use of "Herolin Blood Tonic" under conditions prescribed in the advertisements, or under customary or usual conditions, may cause sub-acute or chronic mercury poisoning and that the preparation should not be used by those having tuberculosis or goiter. The respondent also failed to reveal, according to the complaint, that "Herolin Healing Oil" used under prescribed or customary conditions may cause severe dermatitis and that the preparation is highly inflammable.

The complaint further alleges that "Herolin Blood Tonic" would be definitely harmful because of containing bichloride of mercury and potassium iodide.

The respondents are also charged with misleading use of the words "Manufacturer," "Creators of Guaranteed Beauty Aids" and "Manufacturing Chemists."

Hy-Phen Claims

The Commission has charged Hy-Phen Corporation, Matoaka, W. Va., successor to Bradley's Laboratory, Inc., with misrepresentation of "Hy-Phen."

The respondent, according to the complaint, represented that its preparation will prevent, and is a cure or remedy for, colds; that it is a competent and effective treatment for toothache, earache, neuralgia, twitching nerves, after extraction pains, aching muscles, rheumatic pains, and women's periodic pains, and will relieve the pain attendant on such conditions more quickly and longer than any other preparation. The respondent further represented that its product is safe for use.

The complaint charges that the preparation will not accomplish the results claimed; that its therapeutic properties are limited to that of an analgesic only affording temporary relief from painful symptoms, and having no curative action on underlying factors that cause pain; that its ingredients are similar to those found in many like preparations; that its effectiveness in treating the conditions enumerated is limited to furnishing temporary relief to the symptoms of pain in some instances, and that it would have no therapeutic value in treating such conditions as migraine headaches, infectious diseases, headaches due to infection, pains due to abscessed teeth, or pains resulting from pressure on nerves.

Because of the existence of acetophenetidin, caffeine and hyoscyamus in the respondent's preparation, its administration is not entirely free from danger.

Anti-Drink Claims Cited

Victoria Chemical Company, Newark, N. J., and four New Jersey and New York corporations and nine individual officers are charged with misrepresentation of "Anti-Drink" distributed by them.

The other respondents are Schwarz Druggists, Inc., located with the Victoria Chemical Company at Newark; Schwarz

Exchange BRAND

Citric Acid

U·S·P·

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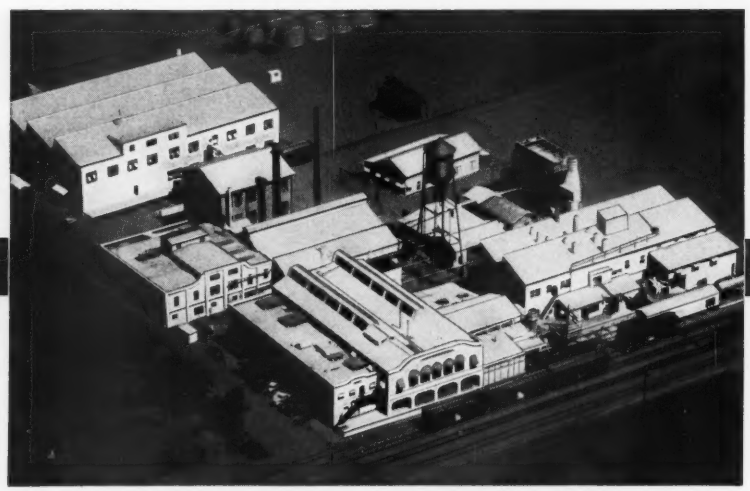

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CALIFORNIA FRUIT GROWERS EXCHANGE, PRODUCTS DEPARTMENT

189 W. MADISON ST., CHICAGO **ONTARIO, CALIFORNIA** 99 HUDSON ST., NEW YORK

IMMEDIATE DELIVERY FROM WAREHOUSE IN NEW YORK, CHICAGO, PHILADELPHIA, SAN FRANCISCO

Drug Company, Bloomfield, N. J.; Schwarz Drug Stores, Inc., Newark; Hiram Schwarz, Inc., White Plains, N. Y.; and Sarah Schwarz, Esther Schwarz, Joel J. Schwarz, Samuel Schwarz, Ira I. Schwarz, Sylvan Schwarz, Hiram Schwarz, Oscar Katz and Jacob Eisen, all officers or executives of the chemical and drug companies.

The respondents have represented that Anti-Drink is a cure or remedy and a competent and effective treatment for alcoholism and the liquor habit; that by its use the desire for alcoholic stimulants is eradicated, and that the preparation is safe for use.

The complaint charges that the preparation is not a cure or remedy or a competent or effective treatment for the liquor habit, and that it is not safe for use as it contains the drug tartar emetic in a quantity sufficient to cause serious injury to health.

Corn-Go Claims

Frank Spors, trading as Spors Company and as Quality Products Company, Le Center, Minn., distributor of "Corn-Go," intended for corns, calluses and bunions, is charged misrepresentation.

The complaint charges that respondent has advertised that Corn-Go "Safely and cleanly removes soft and hard corns, calluses and bunions." These representations are false and misleading, the complaint alleges, as the respondent's preparation is wholly incapable of removing bunions. While the preparation will effect the temporary removal of corns and calluses, the complaint continues, it will not prevent the recurrence of such conditions and has no effect upon the underlying causes of corns and calluses.

Ru-Ex Claims Cited

The Ru-Ex Company, St. Paul, Minn., is charged with disseminating false advertisements concerning Ru-Ex. The complaint alleges, the respondent has represented that the preparation is entirely safe and harmless, and may be used without danger of ill effects upon the health of users. In truth, the complaint continues, these representations are false and misleading, as the preparation contains the drug potassium iodide in a quantity sufficient to cause, in some instances, injury to health if the preparation is used under the conditions prescribed in the advertisements or under such conditions as are customary or usual.

The advertisements disseminated by the respondent, the complaint charges, contain neither a statement to the effect that the preparation should not be used by persons having tuberculosis or goiter, nor a cautionary statement to the effect that the preparation should be used only as directed on the label thereof. Consequently, the complaint continues, such advertisements constitute false advertisements in that they fail to reveal that use of the preparation under the conditions prescribed in the advertisements or under such conditions as are customary or usual, may result in injury to the health of users.

Hayssen Claims Cited

Charles W. Hayssen, trading as H. H. Hayssen Company, Mobile, Ala., distributor of "Dr. Hayssen's Eureka Goitre Balsam," "Dr. Hayssen's Eureka Goitre Ointment," and "Hayssen's Supreme Rheumatism Tablets," is charged with misrepresentation.

The complaint charges that respondent has represented that the goiter balsam and ointment constitute competent and effective treatments for simple goiter, tonsilitis, tumors and other ailments, and that the rheumatism tablets constitute a cure or remedy or effective treatment for rheumatism, diabetes, obesity and other ailments. Respondent further represents that all of his preparations are safe for use.

The complaint charges that the preparations do not constitute cures or remedies for the ailments enumerated, nor are they in all cases safe for use, as they contain the drug potassium iodide in a quantity sufficient to cause, in some instances, serious injury to health.

Female Preparation

Cora Lee Wiley, Adol., Ga., and distributor of "SNL (Suffer No Longer)," is charged with representing that her preparation is a cure or remedy for various diseases and disorders of the female organs, and constitutes a competent and effective treatment for such conditions.

The complaint alleges that these representations are false and misleading; that the preparation is not a cure or remedy for such disorders and diseases and has no therapeutic value in their treatment. The complaint charges that the preparation is made up of an indiscriminate combination of drugs, which, in the proportions used and the method of use, has no basis in medical science.

Menstruaids Cited

Hartig Drug Company, trading as H. K. Pharmaceutical Laboratories, Dubuque, Iowa, distributor of "Menstruaid Nos. 1, 2, 3, 4 and 5" is charged with misrepresentation.

The complaint charges that respondent has represented that the preparations constitute a competent and effective remedy for delayed menstruation; are harmless, and constitute a scientific remedy which is fully guaranteed.

The complaint alleges that respondent's preparations and practices do not justify the claims made and that the products are not safe or harmless, as they contain certain drugs in quantities sufficient to cause serious and irreparable injury to health if used under conditions prescribed in the advertisements, or under such conditions as are customary or usual.

The complaint also charges that the advertisements constitute false advertisements for the further reason that they fail to reveal that the use of the preparations under the conditions prescribed in the advertisements, or under such conditions as are customary or usual, may cause gastro-intestinal disturbances and excessive congestion and hemorrhage of the pelvic organs, and, in case of pregnancy, may cause uterine infection and blood poisoning.

Stipulations

Stuart Tablet Claims to Stop

F. A. Stuart Company, Marshall, Mich., engaged in selling an antacid, "Stuart's Tablets," and Benson & Dall, Inc., Chicago, an advertising agency which disseminated advertisements for F. A. Stuart Company, have agreed to cease advertising that the tablets are a remedy for any dysfunction of the stomach; that they are more efficacious as an antacid than other preparations with like ingredients in similar proportions for the same or similar purposes, or have any action upon the stomach other than to relieve, temporarily, gastric acidity; that the tablets prevent the occurrence of any dysfunction of the stomach, or check or prevent the formation of acid in the stomach; that the effervescent types of stomach antacids lose their alkalizing properties before taking, or that any premium which is offered in connection with the sale of the respondents' products is finished with gold, when such premium has no gold finish.

Smith Bros. Drug to Stop

Smith Brothers Drug Company, Greensboro, N. C., selling "Digesto-Pep" and "Coldlax," has agreed to cease representing that "Digesto-Pep" is a competent treatment or remedy for stomach disorders, or will do anything more than give temporary relief to stomach discomforts associated with gastric hyperacidity; that "Digesto-Pep" will enable a person to eat whatever may be desired without discomfort; and that "Coldlax" will attack a cold at the cause or at the seat of a cold, or will do anything more than give temporary relief from the symptoms of a cold.

Silver Pine Hair Tonic

Dundes & Frank, Inc., New York, according to its stipulation, disseminated advertisements of "Silver Pine Hair Tonic" on behalf of the distributor, Henry Charambura, trading as Silver Pine Manufacturing Company, New York. The respondent advertising agency agrees that, in disseminating advertising for Silver Pine Hair Tonic, it will cease representing that this preparation retards or stops falling hair or stops loss of hair; that it develops

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Obtainable in popular sizes in bright, lustrous Brass, Nickel, Chromium finishes.

Specialists in manufacturing closures of all types.

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healthy scalps or keeps scalps healthy, and that Silver Pine Hair Tonic eliminates or destroys dandruff.

Henry Charambura, trading as Silver Pine Manufacturing Company, agreed to discontinue similar representations in a stipulation released in September.

Activanad to Stop

Charles J. Ahsbahs, trading as Neo-Products Company of America, New York, engaged in selling "Activanad," agrees to cease representing that the preparation is praised or recommended by eminent physicians or psychiatrists; that it strengthens the body or is beneficial for persons afflicted with fear, anxiety, irritability, worry or fatigue; that it benefits failing physical processes, and prevents chronic disorders, or, otherwise, that the preparation has any therapeutic value in the prevention of any ailment or disease.

Under his stipulation, respondent further agrees to cease representing that his preparation prevents fatigue; builds up the body; promotes formation of new blood or is of any therapeutic value in the treatment thereof; strengthens the muscles; promotes sleep; increases capacity for mental concentration; provides new reserves of power, new funds of energy, better poise or self-confidence; provides energy for the body and strengthens the nerves; is an effective aphrodisiac; produces a striking or prompt effect; or is beneficial following childbirth or physical collapse.

Rose Laird To Stop

Rose Helen Kingstone, trading as the B. H. Laird Co. and as Rose Laird of New York, has agreed to cease certain representations of cosmetic preparations designated as "Rose Laird's Greaseless Lubricant, Protective Face Lotion, Overnight Cream and Liquid Facial Soap."

Under the stipulation representation will cease that "the products, alone or in combination, will correct blemishes or other skin ills, conditions or problems, or will enable one to acquire or keep a clear skin, or will enable persons to free themselves from a problem skin; that by use of the products, alone or in combination, one will not have bumpy skin, excess oil, eruptions, coarse pores or blackheads, or that such conditions will be cleared by the separate or combined use of the products."

Orders

Bell-Ans Claims Stopped

The Commission has ordered Bell & Company, Orangeburg, N. Y., to cease misrepresentations of "Bell-Ans."

Commission findings are that the respondent represented that Bell-Ans is a cure or remedy for indigestion; that it will correct other digestive disturbances due to acid conditions and afford permanent relief from various symptoms of digestive disorders, when in fact it has no therapeutic value in treating these ailments in excess of furnishing temporary relief when the disorder is due to gastric hyperacidity.

The Commission order directs that respondent cease representing that its preparation is a cure or remedy for indigestion or that it has any therapeutic value in treating this ailment in excess of furnishing temporary relief when the condition is due to gastric hyperacidity; that the preparation is a cure or remedy for symptoms of digestive disorders, such as flatulence, vertigo, dizziness and other symptoms, or that it is a competent treatment for such conditions in excess of furnishing temporary relief when they are symptomatic of gastric hyperacidity; and that the preparation will correct sour stomach or digestive disturbances due to acid condition or has any value in treating these disorders in excess of furnishing temporary relief when they are due to gastric hyperacidity.

Scholl Must Stop

Scholl Manufacturing Company, Inc., Chicago, manufacturer of "Dr. Scholl's Zino-Pads" and "Dr. Scholl's Kurotex Foot Plasters," for corns, bunions and other foot ailments, has been ordered to cease misrepresentations.

Respondent is ordered to cease disseminating any advertisement which represents that "Dr. Scholl's Zino-Pads" stop pain instantly or in one minute; that corns or calluses can be lifted out after application of "Dr. Scholl's Zino-Pads" without use of surgery or other aids; that use of "Dr. Scholl's Zino-Pads" is a cure or remedy for corns, calluses or bunions; that "Dr. Scholl's Zino-Pads" have healing properties; or that use of "Kurotex Foot Plasters" instantly relieves pain caused by corns, sore toes, calluses, bunions or tender spots on the feet caused by new or tight shoes, or gives any degree of relief from such condition in excess of that which follows from the protection from outside pressure and friction, or gives any relief from such conditions except during the time that the "Kurotex Foot Plasters" are worn.

Blue Jay Claims Must Stop

Kendall Company, Boston, operating a manufacturing division in Chicago under the name Bauer and Black, has been ordered to cease certain representations of "Blue Jay Corn Plaster," "Blue Jay Bunion and Callus Plasters," and "Blue Jay Liquid Corn Remover."

The Commission finds that respondent's products do not constitute a cure for corns, calluses and bunions, since such growths will return after temporary removal unless the pressure and irritation which caused them in the first instance is eliminated. The respondent refers to the cone-like apex of corns as a "root" and represents that its products will remove corns, "roots and all." The findings declare that this part of the corn is not a "root" in the ordinary meaning of the term and is actually the part of the corn which is formed last. Furthermore, respondent's products cannot always be relied upon to remove entirely the cone-like portions of corns which project into the dermis.

The respondent is ordered to cease representing that corns have a root or roots; that the respondent's products will prevent the formation or recurrence of corns or calluses; that any of the respondent's products constitute a new treatment for corns, calluses or bunions; and that the respondent's products will instantly stop the pain caused by corns or calluses.

Phillips' Cream Claims Stopped

Charles H. Phillips Chemical Company, New York, has been ordered to cease misrepresentations of "Phillips' Milk of Magnesia Cleansing Cream" and "Phillips' Milk of Magnesia Texture Cream."

The respondent corporation, according to Commission findings, represented that there is a disease or abnormal pathological condition known as "acid skin" and that this condition and skin ailments which it causes can be cured or overcome by use of respondent's preparations; that the preparations neutralize external excess fatty acid accumulations in the same way that milk of magnesia neutralizes excess acid in the stomach; that use of the texture cream improves skin texture and frees the skin from oiliness, and that the cleansing cream penetrates the pores and thoroughly cleans the skin.

Commission findings are that there is no disease or abnormal pathological condition properly described as "acid skin"; that the respondents' products, in excess of affording certain temporary relief and aiding in the removal of dirt, foreign matter, or skin excretions, will not generally accomplish the results claimed; that the healthy and normal skin and its exudations are slightly acid, and that, although such acid may be neutralized by external applications of either or both of the respondent's preparations, such neutralization is not accomplished in the same way as milk of magnesia neutralizes excess acid in the stomach, and such neutralization is not necessary to the maintenance of a healthy skin condition.

The Commission order directs that the respondent cease disseminating advertisements which represent that there is a disease or condition properly described as "acid skin," which may be cured by use of the respondent's preparations or which causes skin blemishes, blackheads, enlarged pores, oily shine or dry, scaly roughness; that use of the respondent's preparations will cure or overcome skin

blemishes; that use of either or both preparations have value in treating roughness of the skin in excess of temporarily relieving roughness when due solely to dryness; that either or both will remove blackheads or have value in such removal in excess of aid through removing accumulated dirt, foreign matter or skin excretions lodged in the exterior openings of the pores or present on the skin surface; will reduce enlarged pore openings or are of value in the treatment thereof in excess of aiding in their reduction when caused solely by accumulated dirt, foreign matter or skin excretions lodged in exterior openings of the pores; and will overcome or are of value in treating oily shine or oiliness of the face, in excess of temporarily removing accumulated oil from the skin surface.

The order also directs the respondent to cease representing that use of either or both preparations neutralizes excess fatty acid or other acid accumulations on the skin in the same way that milk of magnesia neutralizes acid in the stomach, or that the neutralization of a normal fatty acid or other acid accumulation on the skin is necessary to the maintenance of a healthy skin condition; that the preparations or either of them change or affect the texture of the skin, and that the use of the respondent's cleansing cream or of any other product of substantially similar ingredients penetrates the pores of the skin or thoroughly cleans the skin, except as it acts upon dirt or other matter which may be present on the skin surface or in the exterior openings of the pores.

Primrose House Must Stop

Primrose House, Inc., New York, and Delv, Limited, New York, have been ordered to cease misrepresentations.

Primrose House Sales Company, Inc., a subsidiary of Primrose House, Inc., was engaged in the sale of a skin cream, "Delv", from January, 1934 until May, 1935, at which time it was dissolved and its assets taken over by the parent company. During the time mentioned above, the Commission finds, Primrose House Sales Company, Inc., in promoting the sale of the skin cream represented that "Delv is based upon a new cosmetic principle for it contains a precious new beauty ingredient. This ingredient, called 'Triactin' has the same action on the skin as the skin's own gland fluids that keep it young and vital."

In May, 1935, Primrose House Sales Company, Inc., agreed to abandon the use of certain allegedly false representations. Notwithstanding the aforesaid agreement, the respondents have, since May, 1935, in promoting the sale of Delv represented that Delv contains an ingredient which acts on the skin as the natural fluids of the skin, and that it serves the same purpose as such fluids; that it will rid the skin of wrinkles, large and unsightly pores and other imperfections; that it will nourish and rejuvenate the skin and will create a new skin texture and keep the face young and the complexion beautiful. The Commission finds that these representations are false and misleading.

The respondents are ordered to cease and desist from representing that the preparation acts on the skin as the natural fluids of the skin, or that it serves the same purpose as the natural fluids of the skin; that it will cause wrinkles, large or unsightly pores or other imperfections to disappear from the skin; that it will nourish or rejuvenate the skin or create a new skin texture, or that the preparation will keep the face young and the complexion beautiful.

Crazy Water Stopped

Crazy Water Company, Mineral Wells, Texas, and four of its executives, have been ordered to cease misrepresentations of "Crazy Mineral Water," "Crazy Water Crystals", and "Crazy Fiz."

The four executives named respondents are: Carr P. Collins, H. H. Collins, W. M. Woodall and J. A. Pondrom, individually and as chairman of the board, president, secretary and treasurer, respectively, of the Crazy Water Company.

The Commission finds that respondents have represented that the mineral waters and derivatives will cure or are beneficial in diseases of the alimentary tract, the urinary tract, kidneys and gall duct, and kindred diseases and ailments; that constipation and "faulty elimination" are the causes of, and associated with, numerous ailments, afflictions, and conditions enumerated by them, and that the respondents' products possess beneficial, therapeutic properties with respect to curing and effectively treating constipation and "faulty elimination" and therefore the ailments enumerated.

The Commission finds that the products possess no therapeutic value in excess of those of a cathartic or laxative, plus a tendency to temporarily neutralize excess gastric acidity, and serve no other purpose than to assist in the temporary evacuation of the intestinal tract and to tend to temporarily neutralize excess gastric acidity.

The respondents are ordered to cease and desist from representing that their products are a cure or remedy for certain diseases, or symptoms of diseases, of the alimentary tract, and certain conditions involving the urinary tract, kidneys and gall duct, or constitute an effective treatment therefor in excess of the extent to which the product, by temporarily relieving constipation and gastric acidity, may be beneficial in treating such disorders when constipation and gastric acidity are contributing factors; and that such diseases or symptoms are necessarily caused by, or associated with, or that the respondents' products are a competent treatment for, constipation, faulty elimination, or excess gastric acidity.

The Commission order also directs the respondents to cease representing that such products possess any therapeutic properties beyond those of a cathartic or laxative and as an antacid with a tendency to temporarily neutralize excess gastric acidity; or are a cure, remedy, for, or possess any beneficial therapeutic properties in the treatment of, urticaria, cirrhosis of the liver, chronic metritis, parametritic exudations; diabetes mellitus, gravel and calculous concretion in the bladder and gall duct; fevers, toxic conditions, typhoid, influenza, anaphylaxis, nephritis, pyelitis, catarrhal jaundice, cholecystitis, Bright's disease, kidney trouble, obesity, irregularities of the liver, gall duct and bladder, rheumatism, arthritis, neuritis, high blood pressure, acidosis, lumbago, gout, poisonous system, affected vision, colds, scarlet fever, aching joints, and numbness of limbs, and that these ailments and conditions are caused by, or generally associated with, excess gastric acidity or constipation.

Nail Polish Remover

A. Sartorius and Company, Inc., trading as Plat-Num Perl Laboratories, New York, distributors of manicure products, has been ordered to cease misrepresentations.

The Commission finds that respondent has made false and misleading representations of its nail polish remover. Typical of these representations is the descriptive statement "Plat-Num Olive Oil Compound Nail Polish Remover for dry brittle nails."

The Commission finds that the quantity of olive oil contained in the product is negligible; that the product cannot truthfully be represented as an olive oil product, and that the olive oil content is so small as to be incapable of relieving or improving to any appreciable extent the condition of dry, brittle nails.

The respondent also has represented that "Plat-Num Nail Protector * * * encourages growth * * * strengthens nails," while in truth use of the product does not stimulate or encourage the growth of the nails or serve to strengthen them.

Respondent is ordered to cease disseminating any advertisement in commerce which represents that the preparation "Plat-Num Olive Oil Compound Nail Polish Remover" will relieve or improve the condition of dry, brittle nails or that the preparation "Plat-Num Nail Protector" stimulates the growth of the nails or strengthens the nails. The respondent is further ordered to discontinue using the words "Olive Oil" or any other words of similar meaning to designate, describe or refer to the respondent's cosmetic preparation now designated "Plat-Num Olive Oil Compound Nail Polish Remover" or

otherwise representing that the preparation contains any substantial amount of olive oil.

Kuhn Remedy Must Stop

Kuhn Remedy Company, Chicago, selling "Kuhn's Rheumatic Fever Remedy," now known as "Kuhn's Remedy," has been ordered to cease misrepresentations.

The Commission finds that the respondent has represented that its preparation is a cure or remedy for rheumatism, rheumatic fever and similar ailments.

The Commission finds that the preparation is not a cure or remedy for rheumatism, the other ailments advertised, or for muscular or joint aches or pains, generally; that it does not possess any therapeutic value in the treatment thereof in excess of affording, in some cases, temporary symptomatic relief from aches and pains, and that the preparation contains potassium iodide in quantities sufficient to cause, in some instances, injury to health if taken under the conditions prescribed in the advertisements or under such conditions as are customary or usual.

Respondent is ordered to cease representing that the preparation is a cure or remedy for rheumatism, rheumatic fever, gout, neuralgia, lumbago, muscular or joint aches or pains generally; that it possesses therapeutic value in treating rheumatism, rheumatic fever, gout, neuralgia or lumbago, in excess of affording temporary symptomatic relief from the aches and pains associated with such disorders; that the preparation is in all cases safe or harmless; or advertisments which fail to reveal that the preparation should not be used by those having tuberculosis or goiter (provided, however, that such advertisement need contain only a statement that the preparation should be used only as directed on the label thereof when such label contains a warning to the effect that the preparation should not be used by those having tuberculosis or goiter), and from using the word "Remedy," or any other word of similar import or meaning, as part of the respondent's corporate or trade name, or to designate, describe or in any way refer to such preparation as a remedy in connection with offering it for sale or selling or distributing it in commerce.

Keller Claims Stopped

Charles Keller, doing business as Sorbol Company and as Keller Company, Mechanicsburg, O., distributor of "Sorbol-Quadruple" and "Bukets," has been ordered to cease misrepresentations.

The Commission finds that the respondent has represented that "Buckets" eliminates excess acid and waste from the body and thereby constitutes a cure or remedy for frequent and scanty flow of urine, rheumatic pains, backache and leg pains, which it claims are due to excess acid and waste, and that "Sorbol-Quadruple" constitutes a cure or remedy for simple goiter, and possesses substantial therapeutic value in such condition, and is entirely safe and harmless.

The Commission finds that the representations are false and misleading; that conditions enumerated by respondent generally are not due to excess acid or waste, and that "Buckets" is of no substantial value in eliminating excess acid or waste, and possesses no therapeutic value in excess of a mild diuretic. The Commission finds further that "Sorbol-Quadruple" is not a cure or remedy for goiter and is not in all cases safe or harmless, as it contains potassium iodide in a quantity sufficient to cause, in some instances, injury to health.

The respondent is ordered to cease disseminating advertisements which represent that the conditions known as frequent and scanty flow of urine, rheumatic pains, backache or leg pains are usually or generally due to the presence in the body of excess acid or waste; that "Buckets" is of any substantial value in eliminating excess acid or waste from the body, or constitutes a cure or remedy for frequent or scanty flow of urine, rheumatic pains, backache or leg pains, or possesses any substantial therapeutic value in such conditions, or any therapeutic value in excess of a mild diuretic; that the preparation "Sorbol-Quadruple" constitutes a cure or remedy for goiter of any kind, or that it possesses any substantial therapeutic value in such condition; or which advertisement of "Sorbol-Quadruple" fails to reveal that it should not be used by those having tuberculosis or any form of goiter other than simple goiter (provided, however, that such advertisement need contain only a statement that the preparation should be used only as directed on the label thereof, when such label contains a warning to the effect that the preparation should not be used by those having tuberculosis or any form of goiter other than simple goiter).

Miller Drug Must Stop

Julius Miller and Jessie Miller, trading as Miller Drug Company, Rochester, N. Y., distributor of "Belite," "Reducers" and "Miller's Reducing Prescription," have been ordered to cease false advertisements.

The Commission finds that the respondents represented that their preparation is a cure or remedy for obesity, constituting a safe, competent and effective treatment for obesity and the reduction of bodily weight. The Commission finds these representations to be false and that the preparation contains desiccated thyroid extract in quantities sufficient to cause serious and irreparable injury to the health.

Respondents are ordered to cease representing that the preparation is a cure or remedy for obesity or constitutes a safe, competent or effective treatment for obesity or reduction of body weight; or which advertisement fails to reveal that the preparation may result in permanent injury to the heart, thyroid gland and other vital organs.

X-Bazin Must Stop

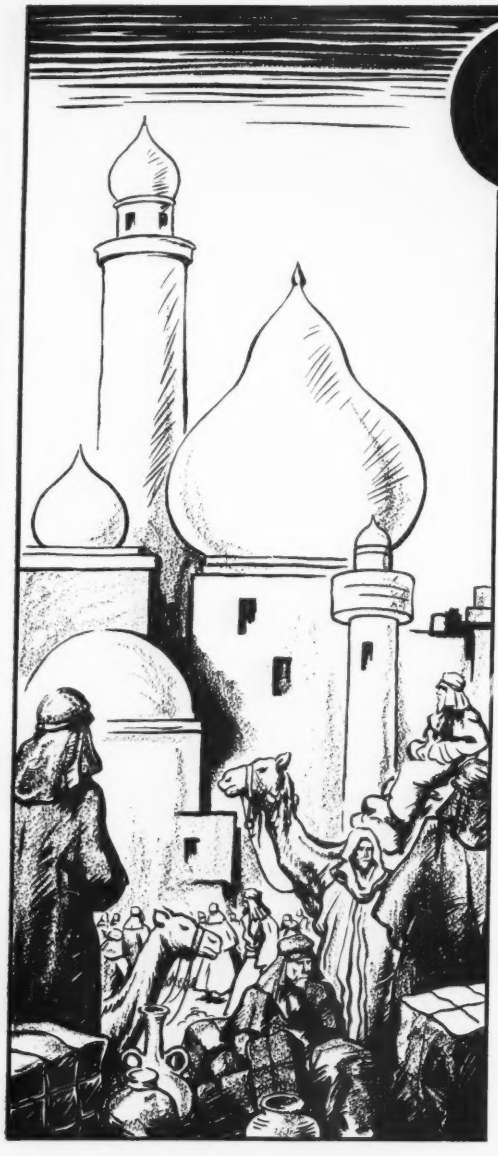
Hall & Ruckel, Inc., Brooklyn, N. Y., has been ordered to cease representing that "X-Bazin" is not caustic or is in all cases entirely safe or harmless; that the product discourages the growth of hair or delays the appearance of hair for any substantial period of time, or that the hair is appreciably slower in regrowing after use of the respondent's product than when the hair is shaved or otherwise removed; that the hair regrowing, after use of the respondent's product, is softer or less coarse than the hair regrowing after shaving; that the results obtained from the use of the product differ essentially from the results obtained from the use of other methods of hair removal; that the product permanently eradicates hair; or that it has been endorsed or recommended by scientists or physicians.

Kongolene Claims Stopped

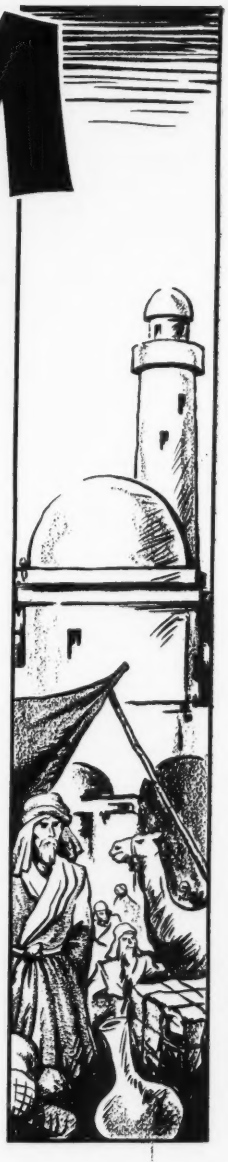
Kongo Chemical Company, Inc., New York, has been ordered to cease advertisements which represent that "Kongolene" is a purely vegetable product; will permanently straighten the hair or contribute to the straightening of the hair in any way other than by softening the hair temporarily; will prevent hair from falling out or promote the growth of hair; will cure or permanently remove dandruff; that the preparation is the greatest discovery of the age, or that the use of the preparation will benefit the offspring of the user; that the preparation is safe or harmless; or which advertisement fails to reveal that use of the preparation may result in severe caustic action upon the skin and scalp, with resulting burns.

Alcoban Claims Stopped

Edwin L. Leisenring, trading as U. S. Drug & Sales Company, U. S. Drug Laboratories, and U. S. Drug Company, and Gordon Leisenring, Denver, Colo., have been ordered to cease advertisements which represent that "Alcoban" is a competent or effective treatment for alcoholism; that it is safe or harmless; that the preparation removes the desire for alcoholic stimulants; or which advertisements fail to reveal that use of the preparation may result in serious injury to the nerves, tissues and lungs, and may produce toxic conditions in the body.



GUM KARAYA TRAGACANTH ARABIC LOCUST



ORBIS GUMS, whole or powdered, are the products of expert experience of forty-two years standing in the selection of fine raw materials and in milling to guarantee complete satisfaction for your most exacting technical requirements.

ORBIS GUMS can be obtained in any mesh from the finest powder to the various granular forms used to a great extent in the drug field—ground in our modern mill at Newark, New Jersey.

ORBIS KARAYA GUM in fine powdered form is specially adaptable for "Wave Sets."

Please let us know your requirements. Working samples upon request.

. . . . . You'll enjoy attending the DRUG, CHEMICAL & ALLIED TRADES BANQUET at the Waldorf-Astoria on March 13th.

ORBIS

PRODUCTS CORPORATION

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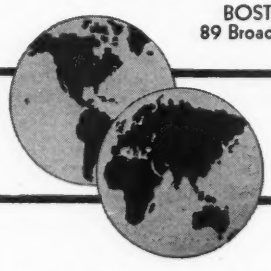
CHICAGO 831 N. Wabash Ave.
PHILADELPHIA 610 Brown Bldg.
BOSTON 89 Broad Street
CINCINNATI 505 W. McMillan St.
MEMPHIS, TENN. 1620 Carr Ave.

Water Soluble Gums	Waxes	Cosmetic Raw Material	Fruit Flavors
Thymol	Stearic Acid	Oleo Resins	Food Colors
Aromatics	Essential Oils	Perfume Bases	Quince Seed
Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss

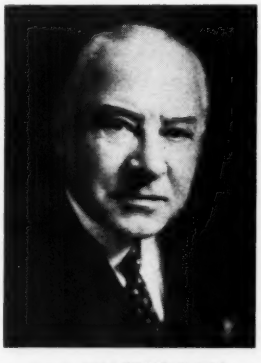


NEWS

People

Dinner to A. A. Wasserscheid

One hundred and fifty personal friends of August A. Wasserscheid tendered him a Testimonial Dinner January 8 in the Jade Room of the Waldorf-Astoria Hotel. The dinner was given in celebration of the seventieth birthday of Mr. Wasserscheid, who is Vice-president of the Mallinckrodt Chemical Works, being associated with the New York office of that concern for the past forty-eight years.



A. A. WASSERSCHEID

Joseph A. Huisking, of Fritzsche Brothers, New York, acted as toastmaster, and the other speakers were: Jesse L. Hopkins, of J. L. Hopkins & Co., New York; James J. Kerrigan, of Merck & Co., Rahway, N. J.; Arthur C. Boylston, of Mallinckrodt Chemical Works, St. Louis; William D. Barry, of Mallinckrodt Chemical Works, New York; Benjamin M. Spencer, of B. M. Spencer & Co., New York; George Simon, of Heyden Chemical Corp., New York; Florin J. Hailer, of United Drug Co., Boston; and Francis J. McDonough, of New York Quinine & Chemical Works, Brooklyn.

Mr. Wasserscheid was presented with a very handsome grandfather's clock.

Thomas Returns

H. Gregory Thomas returned on December 11 from a special mission for the Toilet Goods Association involving a study of conditions in Europe with particular respect to the raw materials needed by the American perfume and cosmetic industry. He had been away for close to four months during which time he visited France, Switzerland, Spain and Portugal, and a complete report on his trip will be made to the executive board of the association. Before his departure he was head of the public relations department of Bourjois, Inc., and he returns to that company in the same capacity.

Storfers Take Cruise

Mr. and Mrs. Benson Storfer and their two sons, Herbert and Fred, sailed on the S.S. America December 21 for a West Indies cruise, during which they visited St. Thomas, Haiti, Puerto Rico and Cuba. They returned to New York early in January. Mr. Storfer is president of Parfums Corday, New York.

Dresel Gives Magna Carta

A copy of the Magna Carta published in London in 1814 was presented to the War Relief Committee of the American Red Cross for Aid to Great Britain by H. Dresel of Felton Chemical Co., Brooklyn. The valuable and elaborate printing, believed to be one of the earliest extant, was auctioned off together with other donations at the Hotel Plaza on December 9.

Jean Lageat Entertains

Jean Lageat, director of Ets. Antoine Chiris, Grasse, France, who is in this country visiting the American company, Antoine Chiris Co., gave a cocktail party at his apartment at the Hotel Barclay, New York, December 17. His guests were the New York representatives of Grasse houses.

Strashun Returns

Paul Strashun, sales manager of Parfums Corday, who left New York on September 29 on the Yankee Clipper for France via Portugal and Spain, returned on December 4 on the American Export liner, Siboney. Instead of the three weeks' stay planned, Mr. Strashun spent 9½ weeks abroad because while in France, Spain closed her borders to everyone. He had to stay in Marseilles for 27 days in company with other Americans. With the aid of the United States Government he was finally permitted to pass the frontier.

Louis Mocq Sends Word

Louis Mocq writes from Dania, Fla., that he just can't get away from the perfume business and that we may hear more about his plans soon.

Mr. & Mrs. Alter to Havana

Mr. and Mrs. I. Alter of the A'Cadia Powder Puff Co., New York, sailed December 31 on the Oriente for a winter vacation in Havana. It was their plan to be away for about three weeks.

Companies

Don Juan Bought by Fougera

The Don Juan lipstick business including trade-marks, formulae, and good will have been purchased by a group headed by W. D. Baker, vice-president of E. Fougera & Co., Inc., as president. The new company is called Don Juan Inc., of Delaware and Francis Crosby, formerly president of Trusteed Industry Shares Management Corp., is secretary and treasurer. The same French head chemist and the entire production staff have been retained by the new company. E. Fougera & Co. continues as distributor for the Don Juan line.

Representatives

Mr. M. C. Boyd,
Quinby Building, Newark, N. J.

Mr. Douglas Haggerty,
122 E 42nd St., New York City

Mr. Warren Curry,
3950 Club Drive, Atlanta, Ga.

Mr. Norman Kole,
980 Merchandise Mart, Chicago, Ill.

Mr. R. F. G. Byington,
155 N. Vermont Ave., Los Angeles, Cal.

It's New!
It's from
KOLMAR
LABORATORIES
MILWAUKEE • NEWARK

Manufacturers of private label brands only. We protect the interests of all our clients with Products Liability Insurance.

Conrey Retires from Merck

Henry S. Conrey, manager of the arsphenamine sales division of Merck & Co., Inc., has retired after fifty years of service with the company. Mr. Conrey's retirement brought to an end ten and a half years of commuting between Rahway, N. J., and Philadelphia. Bearing many gifts from fellow workers be boarded the train for his last regular commuting trip at Rahway accompanied by fourteen Merck employees. The Pennsylvania Railroad had arranged for a special dining car to be attached to the regular commuters' train, and a celebration dinner was served there. Commemorative menus were printed for the occasion, and a cake, lighted with ten and a half candles, was presented by the railroad.

Lentheric "Grand Prix" Trip

The Lentheric sales representatives who achieved their "Grand Prix" quota for 1940 were rewarded with a trip to Hawaii, which left Los Angeles on December 28 and returns to Los Angeles on January 15. Accompanying the salesmen are W. D. Canaday, vice-president in charge of sales, C. S. Gage, vice-president, and D. M. Kendall, assistant sales manager. Lowell P. Weicker, president of Lentheric, flew to the coast to preside at a dinner held at the Hotel Ambassador on December 27 and to bid bon voyage to the Lentheric group which sailed on the S. S. Lurline the following day. New Year's Eve was celebrated at sea as was also New Year's Day. At Honolulu, the Lentheric executives and "Grand Prix" winners stayed at the Royal Hawaiian Hotel and enjoyed a week of sight-seeing around the city and the island. There was an occasional business session to give the salesmen a preview of plans for 1941.

Penick Expands in Chicago

The Chicago branch of S. B. Penick & Co. has acquired new and larger quarters. A brick building with a floor area of approximately 50,000 square feet has been completely modernized and will house the offices, warehouse, and processing activities. Harold Meyer, who has been affiliated with Penick since 1926, has been in charge of the Chicago branch since it was opened in 1934.

Cowles Detergent Appoints Innis-Speiden

Cowles Detergent Co., Cleveland, has appointed Innis Speiden & Co., as Ohio distributor for "Drymet," "Crystamet" and "Dryorth" powdered silicate products. Don Cushman is Cleveland manager for Innis, Speiden & Co. which will carry a stock of Cowles heavy chemicals in Cleveland to serve the Ohio and Western Pennsylvania markets.

HENRY CONREY CUTTING HIS CAKE

Dubarry Protects Name

The Supreme Court in Buenos Aires has handed down a decision that the use of the trade name "Le Sancy" by Fernandez Iglesias and Jorge Alberto Vergara for razor blades is a violation of the Dubarry trade trade name "Le Sancy" for toiletries.

The case was first tried before a court which was favorable to Dubarry, holding that the defendants were infringing on the rights of the plaintiffs in using the name "Le Sancy" as a trade name for their razor blades, even though they were listed under a different number from Dubarry's products, and considered as a hardware article.

The case was tried before the Federal Court which reversed the decision. It was then taken to the Supreme Court which revoked the decision of the Federal Court, basing its decision on the fact that even though listed under a different classification, since razor blades are sold in places where toilet goods are sold, the defendants were benefitting themselves by the many years' advertising and renown of complaint's name and products when they used the name "Le Sancy" for their razor blades.

Groover-Stewart Moves

The Groover-Stewart division of McKesson & Robbins, Orlando, Fla., has moved to larger quarters at 320 W. Robinson St., that city.

Norwich Plant Addition

Norwich Pharmacal Co., Norwich, N. Y., has awarded the contract for the construction of a two-story addition to its plant. The new unit will be 75 by 85 feet and will cost approximately $50,000.

Watkins-Squibb Plan Director

John S. Watkins, Kansas City druggist, has been elected to the board of directors of the Squibb Plan, Inc., to fill the vacancy caused by the death of Denny Brann of Des Moines.

In 1910, Mr. Watkins, a graduate of the Kansas City College of Pharmacy, established his first store at 21st and Prospect, Kansas City. In 1923, with three others, he organized the Crown Drug Co. of Kansas City and served as its president, helping to build it from six stores to an 86-store chain. In 1933 Mr. Watkins decided that he wanted to return to the role of an independent pharmacist and today he has two stores in Kansas City, one in the de luxe shopping section at Country Club Plaza, and the other in a beautiful residential section at 63rd and Brookside.

Grove to Aid Draftees

Grove Laboratories, St. Louis, has announced that each and every one of its employees who is called for military training will have his job held open for him and, in addition, the company is going to make up the difference between his army pay and his regular salary so that, while in training, he will receive the same amount as he did with the company.

Crown Cork & Seal to Build

Crown Cork & Seal Co., Baltimore, has plans for the construction of a group of warehouses for the storage of cork and a battery of storage silos. The cost of the new construction is expected to come to about $332,000.

LUSTEROID

IS A PACKAGING SERVICE

LUSTEROID offers a complete packaging service to all industry—and especially to the drug, cosmetic, petroleum products fields and to the packagers of small objects. A custom package is designed to fill each specific need, whether it be for sale packaging or sampling.

LUSTEROID rigid cellulose vials and tubes offer economy and convenience. They are extremely lightweight and unbreakable—cost less to pack and ship. They can be used on your present packaging equipment and will take most standard closures. They are designed and produced in a wide variety of sizes and shapes.

A note or phone call will bring an answer to your packaging problem.

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METAL · EMBOSSED
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DIE STAMPING FOR BOXMAKERS

Here's what you'll like about the new

..."HAGERTY HANDY FILLER"

- Durable
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- Light construction

The most practical hand filler for creams, lotions and liquids.

Write for illustrated folder and prices

HAGERTY BROS. & CO.

10 Platt Street **New York, N. Y.**

Est. 1849

Whittaker, Clark & Daniels, Inc. Celebrate 50th Anniversary

Officers and employees of Whittaker, Clark & Daniels held a Christmas Party and Dinner at the Wool Club on December 21st, to celebrate the Golden Anniversary of the Organization and the 43rd Anniversary in service, of Samuel H. Clark, President.

Mr. Clark was aided by his son, Clarence E., in springing a number of lively surprises on the assembly. Christmas Carols were sung with "gusto," and Mr. Clark, Sr., did some fine work on the piano. Mr. Roy Jarvis, accompanied by his sister, Pearl, of the New York office, rendered several breezy accordion solos. The men from the Warehouses played an important part in the entertainment. Mr. Sherman Robinson, the Dean of the Industry, made appropriate remarks.

Other high spots of the evening included the showing by Mr. Clarence E. Clark, of a group of pen and ink sketches by "Doug" Smith, tracing the history of the Company and its growth from small quarters half a century ago, at 245 Front St., New York, to the firm's present plant at South Kearny, N. J. Also "Doug" in his sketches envisioned the "Whittaker Plant of Tomorrow."

"Santa Claus," played by "Al" Willms, would pass on to Mr. Clark the bonus envelopes and Mr. Clark's autographed photo, as he would present them individually to the 57 employees, with appropriate personal remarks to each recipient. There was reflected an unusually genial spirit as existing between employer and employee.

Later, a thrilling entertainment was given by J. Lloyd Handy, of William Rea Advertising Agency, account executive for Whittaker, Clark & Daniels, Inc. Mr. Handy, a professional magician, presented "Magical Mysteries."

A good wholesome time was enjoyed by all, and the event clearly demonstrated that the "Whittaker" Organization can be classed as a "Family."

CHRISTMAS PARTY OF WHITTAKER, CLARK & DANIELS

Lewis Merges with Bauer and Black

Lewis Manufacturing Co. and Bauer & Black, both well-known companies in the surgical dressing business and both divisions of the Kendall Co., were consolidated January 1.

In the past the two divisions have operated as separate units with their own manufacturing plants, brands and personnel. The manufacturing personnel and facilities will remain unchanged and the sales personnel will remain the same. A few transfers to new territories and new assignments will be made but on the whole salesmen will continue to call on their regular customers.

The headquarters of the new consolidated division will be at Bauer & Black, 2500 So. Dearborn St., Chicago. R. A. Whidden continues as president and C. K. Perkins, as general sales manager and H. B. Crow as sales manager. The executive sales staff of the Lewis Manufacturing Co. has been transferred from Walpole, Mass., to Chicago and will continue to service the hospital market.

Hopkins Appoints Dr. Dees

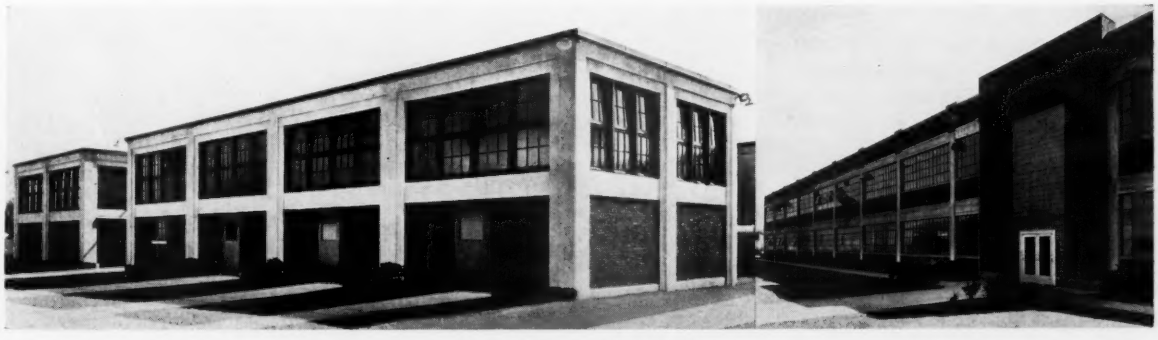
J. L. Hopkins & Co., New York, has appointed Dr. W. E. Dees as laboratory production manager. Dr. Dees was formerly with Parke, Davis & Co. and also F. A. Thompson & Co., both of Detroit.

Abbott Laboratories Builds

Abbott Laboratories, North Chicago, Ill., has announced the completion of two new fire-proof buildings for the manufacture of arsenicals, and a two-story addition to its main production building.

One of the new arsenical buildings contains approximately 1600 square feet of floor space and will be used for storage purposes, while the other, with a floor area of 2500 square feet, will be used for manufacturing such products as Arsphenamine, Neoarsphenamine, Bismarsen, Trisodarsen and other chemotherapeutic agents formerly made in Philadelphia. A feature of the latter building is the interior use of a light colored bitrified tile with a ceiling of special porcelain enamel, said to be the first known use of porcelain sheets as an integral part of concrete ceiling construction. The ceiling with the tiled sidewalls provides a finish of lasting quality that is non-absorbent, thus assuring the highest degree of sanitation. Certain departments have been completely air-conditioned.

The addition to the main production building provides, with its special glass block front, not only the principal entrance to this unit and approximately 15 per cent. more floor space, but a more efficient arrangement for the proper flow of production.



NEW ABBOTT BUILDINGS

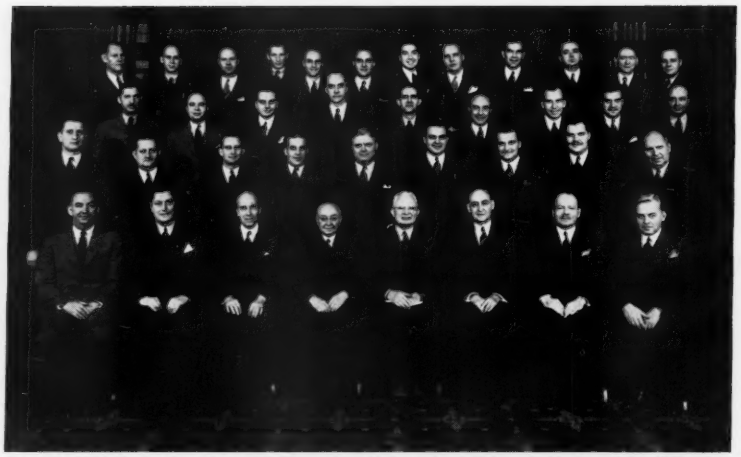
Fritzsche Brothers Sales Meeting

The annual sales conferences of Fritzsche Brothers, Inc., held at the Hotel New Yorker, New York, December 9 to 14, were attended by Fritzsche department heads and twenty-two of the firm's representatives.

On the second day of the meeting Dr. Ernest Guenther, chief research chemist of the company, showed for the first time his motion pictures of essential oil production in the United States which he took during the recent summer and fall. These films covered the production of peppermint, spearmint, wintergreen, wormwood, erigeron, tansy, sweet birch, sassafras, dill, cedarwood and other domestic oils. A film record of his flying trip to the West Indies, Central and South America and Mexico was also shown.

Another featured event of the week was a trip on Saturday morning to the company's plant at Clifton, N. J. There the representatives and a number of the New York office personnel had an opportunity to see the company's greatly enlarged manufacturing facilities—new distilleries, control laboratories, etc.—in their present well-advanced stage of construction.

That evening the week's activities were brought to a climax when the company held its annual dinner dance in the Grand Ballroom of the Hotel New Yorker. In a brief address, F. H. Leonhardt, president, welcomed some two hundred and seventy employees, the largest all-employee gathering in Fritzsche Brothers' entire history.



Fritzsche Brothers, Inc. Sales Conference of executives, department heads and representatives, Hotel New Yorker, December 9th to 14th, 1940. Reading left to right, Front row: F. L. Hilbert, J. A. Huisking, R. R. Redanz, W. A. R. Welcke, F. H. Leonhardt, Geo. L. Ringel, J. H. Montgomery, E. S. Guenther. Second row: C. W. Edwards, C. C. Schneider, C. H. Bryson, L. W. Speck, J. J. Cummings, R. S. Armstrong, T. F. May, H. P. Bowra, J. H. McNamara. Third row: J. A. Gauer, F. A. Barada, H. D. Van Hoven, E. H. Hamann, C. C. Bryan, J. R. Eller, W. R. Godfrey, J. F. Shumaker, S. Crouch. Top row: H. P. Wesemann, E. Lawson, R. Krone, J. G. Hoffman, G. A. Wohlfort, K. S. Spraker, W. M. Eller, M. J. Niles, G. R. Fellows, C. H. Milton, L. E. Young, R. W. Wilmer.

Huisking Pays Bonuses

All employees of Chas. L. Huisking & Co. received bonuses December 30. Bonuses were based upon the number of years service with the firm. All employees who had been with the company for one year received one month's salary, and additional amounts were added to this as length of service to the firm increased.

In addition to the one month's salary, those with the firm three years received $35.00; those with the firm four years received $50.00; those with the firm five years received $100.00. Starting with six years service the amount given in addition to one month's salary started at $125.00 and then increased in geometric ratio by $5.00 increments for each additional year of service. This resulted in those with twenty years service receiving one month's salary plus $725.00; and those with twenty-five years service receiving one month's salary plus $1,175.00.

Three employees of the firm have a record of twenty-five years service: John J. Lantz; K. A. Koehler; Phillip C. Meegan. Two employees have a record of twenty years service: William M. Rothenbusch; Miss Mary Howlin.

Monsanto Advances Krase

Herbert J. Krase, assistant director of research and patent attorney for Monsanto Chemical Co.'s phosphate division, has been transferred from the plant at Anniston, Ala., to the company's central research laboratories at Dayton, Ohio. Mr. Krase will now have charge of all patent work for the central research laboratories as well as for the phosphate division.

Mark Elmo Opens Own Business

Mark Elmo, associated with Elmo Sales Corp., Philadelphia, for many years has resigned to organize his own business, Mark Elmo, Inc. Headquarters for the new company will be in San Francisco and it will do a general sundries business.

Haus Back From Trip

Harry A. Haus, director of sales of the George W. Luft Co., has returned from an eight weeks' trip, during which he covered most of South America, accompanied by Mrs. Haus.

Great Lakes Pharmacal Co.

The Great Lakes Pharmacal Corp. has been chartered at Buffalo, N. Y., with a capital of 200 shares of no-par common stock. The principals are Kenneth F. Ruhl, Evelyn B. Hamlin and Elizabeth Cieri.

Greeff Gives Rolling Kitchen

A rolling kitchen, capable of feeding 200 people at a time, has been presented to the British War Relief Society, Inc., by R. W. Greeff & Co., Inc., New York, and

Charles L. Huisking, president of Chas. L. Huisking & Co., distributing bonus checks to the twenty and twenty-five year employees of the company. Peter A. Dirr, vice-president of the company is at the extreme right. The employees shown are from left to right: William M. Rothenbusch, Phillip C. Meegan, K. A. Koehler, John J. Lantz, and Miss Mary Howlin.

its officers. These rolling kitchens are being built in the United States for the British War Relief Society and can be shipped almost immediately upon order. They have built-in equipment to cook hot foods right on the field of emergency and have insulated compartments which keep food hot for hours.

M.M.&R. Sales Convention

Members of the sales staff of Magnus, Mabee & Reynard, Inc., from every state, and company sales representatives from Canada and Mexico attended the company's general sales convention in New York, January 3 to 6. Owing to the increase in the sales staff and the greatly enlarged production schedule at the M.M.&R. building, the sessions were held at the Hotel Warwick.

P. C. MAGNUS

Plans for 1941 were discussed as well as many of the recent technical advances in the use of essential oils, balsams, flavoring and perfuming oils and other phases of the M.M.&R. operations. Possibilities of the substitution of M.M.&R. compounded substitutes as replacements for raw materials which the war had made unavailable or on which it had sky-rocketed the prices, were pointed out. Magnus, Mabee & Reynard, Inc. has been experimenting for many years with the promotion of substitutes.

The four-day convention, which was brought to a close with a banquet, was under the direction of A. H. Downey, technical director and laboratory chief. He was assisted by a committee including J. B. Magnus, vice-president; William F. Fischer, sales manager; R. C. Ringgold, assistant to the president; George H. McGlynn, treasurer; M. Stanley Barker, New York field representative; and Sidney Matthew Weiss, advisor on advertising and sales promotion. Talks by men prominent in several of the industries served by the M.M.&R. organization were also heard.

Standard Synthetics Expands

J. L. Hindle of Standard Synthetics, Inc., has announced that increasing business made it necessary to move during the first week in January to larger quarters at 119 West 25 St., New York.

Palmer and Weicker Advanced by Squibb

Carleton H. Palmer, president of E. R. Squibb & Sons, has been elected chairman of the board. He continues in the capacity of chief executive officer of the company. Lowell P. Weicker, vice-president in charge of sales and advertising, has been elected president.

Mr. Palmer's election to the chairmanship coincides with his thirtieth anniversary with the company. He joined Squibb in 1910 and served in various executive capacities until he was elected to succeed his father, the late Lowell M. Palmer, as president, upon the latter's death in 1915.

C. H. PALMER

LOWELL P. WEICKER

Mr. Weicker became associated with E. R. Squibb & Sons in 1928 as manager of its European interests. He succeeded his father, the late Theodore Weicker, as vice-president when the latter became chairman of the board five years ago and held the position until his recent election to the presidency.

American Can Changes

C. H. Black has been appointed vice-president in charge of sales of American Can Co. He was formerly general manager of sales, general line. Mr. Black joined the company in 1908 and has played a prominent part in the sales organization during his entire business career.

K. S. Breckenridge, vice-president, located in Chicago, retired from active business December 31. G. H. Kellogg, vice-president in charge of packers can sales, has been appointed vice-president in charge of the central district with headquarters in Chicago.

Other significant changes in the company include the appointment of J. A. Stewart, formerly general manager of manufacture, packers cans, vice-president; and R. C. Taylor, formerly general manager of manufacture, general line, as vice-president.

C. H. BLACK

On the Pacific Coast, A. C. Webb has been appointed general manager. He has served for the past twenty-two years as district sales manager with headquarters in the San Francisco office. The position of district sales manager will be filled by D. A. MacArthur.

McK. & R. Honors Service

Five hundred and forty-one employees of McKesson & Robbins, Inc., who have been with the company 25 years or more and whose aggregate length of association is more than 18,000 years, have been honored by the company with individual awards of engraved certificates, a bronze plaque and 25 year and 50 year association buttons.

The awards were made at ceremonies held in 57 branch houses of the company throughout the country. The list nationally, was headed by A. H. Van Gorder, head of the Hall-Van Gorder Division of McKesson at Cleveland, who has been associated with McKesson or its predecessor companies for 64 years. The president of the company, C. F. Michaels, has 54 years to his credit in his association with McKesson and predecessor companies. Others with 50 or more years of service are: James L. Duggan, Boston; John H. Kratz, Burlington, Iowa; Walter D. Engel, Cairo, Ill.; William Buss, Chicago; Charles A. Abrahamson, Chicago; Alfred Schwanker, Cleveland; A. H. Van Gorder, Cleveland; Frank Bures, Cleveland; William F. Wollpert, Cleveland; Lloyd B. Mitchell, Dallas; Sidney G. Hurd, Kansas City; James G. Laidlaw, Kansas City; Edward C. Hamill, Kansas City; Parson W. Strawbridge, Kansas City; Charles K. Lincoln, Little Rock; William G. Best, Memphis; Harry R. Kittle, Minneapolis; Charles S. Martin,

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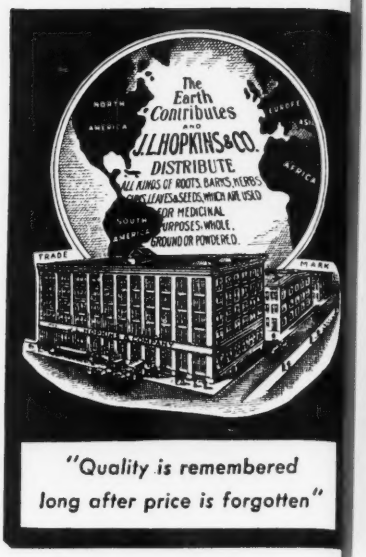

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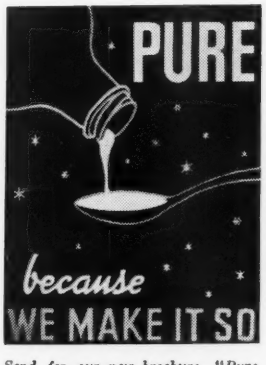

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STOCKS CARRIED IN PRINCIPAL CITIES

Attend the 16th Drug Trade Dinner, March 13th at the Waldorf-Astoria, New York City

Sr., Nashville; Charles W. Whittlesley, New Haven; Frederick A. Wolff, New Haven; Edward Krause, Omaha; Charles S. Hoffert, Omaha; Luther B. Hoyt, Omaha; George E. Kocian, Peoria; Fred F. Kneer, Peoria; Enon Royer, Peoria; Joel P. Bronaugh, Portland, Ore.; Coine Sam Dong, Sacramento; William F. Geary, Sacramento; James Whitney Penfield, Spokane; Edwin O. Hapgood, Springfield, Mass.; George W. Sturtevant, Syracuse; Charles F. Michaels, New York; Wilbert E. Gitus, New York; Edwin Greer, Bridgeport, Conn.; Alfred S. Lowry, San Francisco; Charles J. Fox, San Francisco; Patrick J. Kellcher, San Francisco.

Renner Advanced by Monsanto

Ferderick C. Renner, assistant manager of the New York branch of Monsanto Chemical Co., has been promoted to the position of assistant manager of sales of the company's organic chemicals division, with headquarters in St. Louis. The appointment, which took effect January 1, was occasioned by the departure of Harvey M. Harker, assistant general manager of sales, to assist in the development of Monsanto interests in Australia.

FREDERICK C. RENNER

Mr. Renner was graduated from Washington University, St. Louis, in 1922 and joined the Monsanto sales staff in 1923. He was transferred to the Merrimac division in Everett, Mass., in 1929 where he was put in charge of sales of the New England Alcohol Co., and later made assistant sales manager of the division. In 1939 he was transferred to the Monsanto New York office as assistant manager.

Clare F. Trombley, in charge of sales of organic chemicals and phosphate division products at the Everett, Mass., Monsanto office, has been transferred to the New York office where he becomes assistant general branch manager.

Iodent Plant Addition

Plans for a two-story and basement manufacturing plant at Detroit are being made by the Iodent Chemical Co. The new plant which will cost approximately $75,000 will be of brick, concrete and steel construction.

New Plastics Plant for Carbide

Union Carbide & Carbon Corp. has announced plans for the construction at Bound Brook, N. J. of a plastics plant, costing several millions of dollars, which will be one of the largest plastics production units in the country.

The new plant will be used for the manufacture of Vinylite plastic which has many varied uses in such fields as clothing, food packaging and heavy industry. It will adjoin the plant of the Bakelite Corp., another unit of Union Carbide & Carbon Corp. The building will be 580 by 250 feet and will be situated on a 200-acre tract. The plant is expected to be completed next summer.

Associations

Chicago Association Elects

The annual business meeting and election of officers of the Chicago Perfumery, Soap & Extract Association was held Friday, December 27, at the Morrison Hotel. The following officers were unanimously elected: president, Carl M. Black, S. B. Penick & Co.; vice-president, William H. Schutte, P. R. Dreyer, Inc.; and secretary-treasurer, C. A. Hammond, F. N. Burt Co.

S.O.C.M.A. Elects

At the regular yearly meeting of the Synthetic Organic Chemical Manufacturers' Association, held at the Chemists' Club, New York, December 12, all of the officers were elected for another year. The president is August Merz, Calco chemical division of the American Cyanamid Co.; first vice-president, Dr. E. H. Killheffer, E. I. duPont de Nemours & Co.; second vice-president, Dr. F. G. Zinsser, Zinsser & Co.; treasurer, Ralph E. Dorland, Dow Chemical Co.; and secretary, C. A. Mace, New York.

Professor Marston T. Bogert, of Columbia University addressed the members on the subject, "Peace Through Preparedness" and the secretary, Charles A. Mace, reviewed the activities of the association during the past year. Mr. Mace pointed out that, "the Swiss representatives here have been moderately successful in keeping up replacements via Lisbon but the closing of Genoa has shut off Germany."

Proprietary Assn. Scientific Meeting

At a meeting of the scientific section of the Proprietary Association held at the Biltmore Hotel, New York, December 4, the results of investigations and research during the past year were discussed. Dr. George F. Reddish, Lambert Pharmacal Co., chairman of the section, presided at the meeting.

Dr. William L. Sampson, Merck & Co., discussed vitamin B complex and Dr. James C. Munch, presented a paper on the nomenclature of medicinals with particular reference to those which stimulate the nerve endings. Dr. F. J. Cullen, executive secretary and Washington representative of the association discussed the legal developments affecting the industry.

J. E. Harrison, LaWall and Harrisson, spoke on phenol coefficient determinations; Dr. E. G. Klarmann, Lehn & Fink Products Co., discussed the impossibility of speaking of soaps as germicidal; Dr. H. D. Pease spoke on the effect on animals of medicinals; and Dr. E. C. Merrill, United Drug Co., spoke on "gadgets."

Drug Trade Dinner March 13

John J. Toohy, chairman of the Drug, Chemical and Allied Trades Section of the New York Board of Trade, has announced that the 16th annual Drug, Chemical and Allied Trades Dinner will be held Thursday evening, March 13, at the Hotel Waldorf-Astoria, New York. The reception will begin, as usual, at 6.30 P. M.

JOHN J. TOOHY

Rudolph F. Berls, McKesson & Robbins, Inc., has been appointed chairman of the reception committee with Victor E. Williams, Monsanto Chemical Co., acting as vice-chairman. The publicity committee is headed by Ira P. MacNair, MacNair Dorland Co., with Thomas R. Farrell, editor of THE DRUG AND COSMETIC INDUSTRY, acting as vice-chairman.

At a special meeting of the publicity committee held at the Chemists' Club, January 6, Mr. Toohy announced the appointment of a committee composed of key-men in other cities to organize delegations from those localities to attend the dinner. Members of this committee are: M. G. deNavarre, Maison G. DeNavarre Associates, Detroit; C. C. Nowland, George H. Nowland Co., Cincinnati; C. P. McCormick, McCormick & Co., Baltimore; Florin J. Hailer, United Drug Co., Boston; Samuel Bell, S. H. Bell Co., Pittsburgh; C. L. Drum, Chicago Drug and Chemical Association; H. A. Nelson, Chemical Supply Co., Cleveland.

The reception committee for the dinner held its organization meeting in the Jansen Suite of the Waldorf-Astoria, January 9.

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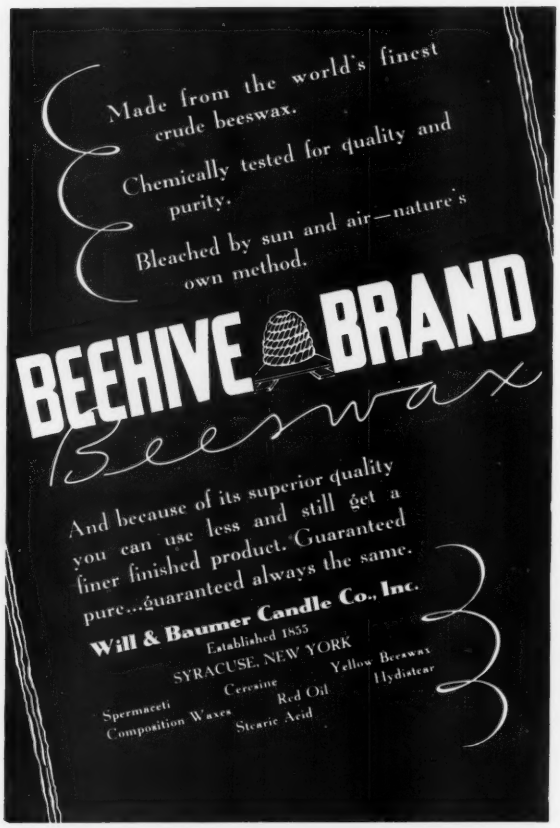
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F.W.D.A. Meeting Feb. 4-6

S. C. James, president of the Federal Wholesale Druggists' Association, Inc., has announced that the mid-winter meeting of members will be held at the Hotel Roosevelt, New York, February 4 to 6.

February 4 and 6 will be devoted to a meeting of active members only, and a joint meeting of manufacturers and wholesalers will take place on the morning and afternoon of the 5th.

Foragers Elect

At the annual meeting of the Foragers of America held in New York December 27 the following officers were elected to serve for 1941 and 1942: H. T. Georgi, president; Walter A. Conklin, vice-president; and A. J. Connolly, secretary-treasurer. The board of governors consists of Frank L. Graham, J. A. Curry, George Dermody, W. W. Neilson, T. M. Hanlon and Jacques J. Franz.

Co-Metic Banquet

The Co-Metic Club of Minneapolis held its annual banquet at the Radisson Hotel, December 12, with 35 members attending. At the annual meeting this year, T. J. McMillan, (Richard Hudnut), was elected president; F. M. Hayes, (Harriet Hubbard Ayer), vice-president; H. J. Johnson, (Wrisley), secretary and treasurer; W. E. Kugler, (Parfumerie de Raymond), and M. Schofer (Dr. West), directors.

Drug & Chem. Club Party

The Drug and Chemical Club, New York, held its annual Christmas party, December 23. A portion of the receipts was donated to the Children's Christmas party at the Beekman Hospital.

Members of the dinner committee were: William D. Barry, Mallinckrodt Chemical Works; Donald Bokee, William A. Bonner, Albert N. Butler, Herbert Bye, Raymond N. Caverly, Richard V. Goodwin, J. Charles King, Robert B. Magnus, Magnus, Mabee & Reynard; G. H. Niemeyer, Handy & Harmon; S. B. Penick, Jr., S. B. Penick & Co.; John L. Smith, and V. E. Williams, Monsanto Chemical Co. John J. King was chairman of the entertainment committee.

Baltimore Drug Ex. Elects

At the annual meeting of the Baltimore Drug Exchange the following officers were elected: president, John O. Robinson, H. B. Gilpen Co.; first vice-president, Frank L. Black, Hynson, Westcott & Dunning; second vice-president, Lester W. Jones, McCormick & Co.; secretary, W. L. Lowry, Yager Liniment Co.; and treasurer, Leroy Oldham, Leroy Oldham & Co.

Members elected to the executive committee were: C. H. Klingel, Howard Drug Co.; P. I. Heuisler, Maryland Glass Co.; and Edward S. Muth, Muth Bros. & Co.

Chicago Dinner Dance

The annual dinner-dance of the Chicago Perfumery, Soap and Extract Association was held at the Terrace Casino of the Morrison Hotel, December 7. It was the biggest party in the history of the association and 639 enjoyed the dinner, dancing and floor show.

Arrangements were made by R. L. Holland, chairman of the entertainment committee, and J. D. Small.

Essential Oil Assn. Meeting

The annual meeting and election of the Essential Oil Association of the U. S. A. was held at the Hotel Warwick, New York, January 9. The business meeting which was limited to members was held at 6.00 P. M., and was followed by a cocktail party and dinner.

The committee in charge of the meeting was composed of Charles Fischbeck, of P. R. Dreyer, Inc., president of the association; and William Schilling, Jr., Norda Essential Oil and Chemical Co., chairman; Robert B. Magnus, Magnus, Mabee & Reynard, Inc.; and Ray C. Schlotterer, maganging director of the association.

Minimum Wage Meeting

The meeting of the Drug, Medicine and Toilet Preparations Industry Committee which was scheduled for January 8 has been postponed until January 29 in Washington.

Sumner S. Schlichter of Harvard University is chairman of the committee which will investigate economic and competitive conditions in the industry and recommend a minimum wage rate from 30 up to 40 cents an hour. It has been estimated that there are 44,000 people employed by the industry and that 9,000 of these are paid less than the latter rate at present.

The committee is equally representative of the public, the employers and the employees. The public members, in addition to the chairman, are Charles O. Gregory, Professor in the Law School, University of Chicago; Jonathan Daniels, editor of the Raleigh News and Observer; Joseph A. McClain, Jr., dean of the School of Law, Washington University, St. Louis; Stuart F. Heinritz, editor of Purchasing, New York; and Egbert Harold van Dalden, assistant professor, School of Commerce, Accounts and Finance, New York University.

The employer members are: James M. Buck, Jr., Plough, Inc., Memphis; M. C. Eaton, Norwich Pharmacal Co., Norwich; Alvin G. Brush, American Home Products Corp., New York; Paul Vallee, Roger & Gallet, New York; Edward Beardsley, Miles Laboratories, Inc., Elkhart, Ind.; and George R. Flint, Flint; Eaton & Co., Decatur, Ill.

The employee members are Herman Edelsberg, Washington, Irving Weiland, New York, and Louis Weiner, Chicago, all of the United Mine Workers of America, C. I. O.; and Leonard Johnston, Kansas City, Mo.; Boris Shishkin, Washington, D. C., and H. A. Bradley, Akron, O., all of the A. F. of L.

Obituaries

Edgar Bomer

Egar Bomer, son of Walter L. Bomer, vice-president of the Bristol-Myers Co., New York, was killed in an automobile accident at Palos Verdes Hills, Calif., December 2. He was twenty-seven years old.

Robert B. Brown

Robert B. Brown, general manager of the Newark, N. J., plant of the Calco chemical division of American Cyanamid Co., died in Newark, December 23. He was fifty-seven years old.

Mr. Brown, a graduate of the Massachusetts Institute of Technology, was, for twenty years prior to joining Calco, general manager of the Chicago branch of Sherwin-Williams Co.

William Cobb

William Cobb, a research chemist for Monsanto Chemical Co., St. Louis, died November 29. His death was the result of injuries received in a fall on November 21 when hunting near Sullivan, Mo.

Charles Morgan

Charles Morgan, until his resignation about a year ago, the oldest director of the Calvert Drug Co., Baltimore, has died. He was eighty-four years old. Mr. Morgan was also one of the founders and president of Morgan & Millard, Baltimore retailer.

Harry M. Sloan

Harry M. Sloan, vice-president and treasurer of United States Industrial Alcohol Co. since 1935, died December 31 at St. Luke's Hospital, New York, after an illness of six months. He was sixty-two years of age.

Mr. Sloan was born in Magnolia, Iowa and, after attending high school in Logan, Iowa, specialized in accounting and finance. He was auditor for the Chicago, Rock Island & Pacific Railroad in Chicago and then assistant to the president. He was with the National Defense Commission during the World War and from 1920 to 1935 was treasurer and sales manager of the Buda Co.

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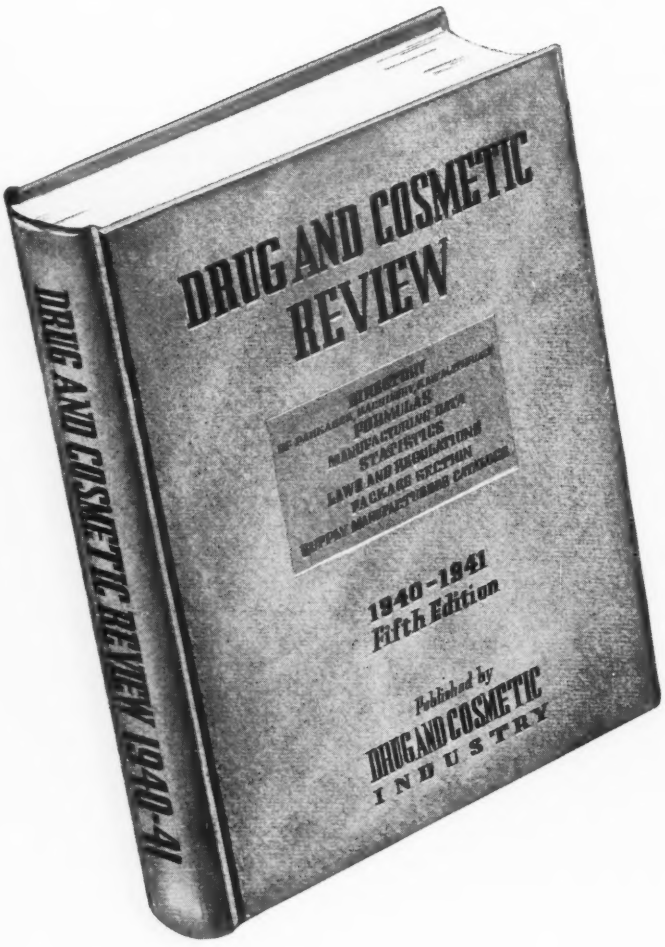

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3 Statistics—10 year range in prices on over 1,000 materials, imports, etc.

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INDUSTRY'S BOOKS

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Catalysis—Inorganic and Organic, by Sophia Berkman, Jacque C. Morrell and Gustav Egloff, 1130 pp., Reinhold Publishing Corp., New York, Cloth $18.

The fact that many modern chemical processes and industries are based on the use of catalysts clearly emphasizes the importance of a thorough knowledge of the subject of catalytic chemistry. The complexity of the phenomenon of catalysis at the present time does not permit the application of a single theory unequivocally to various types of catalytic reactions. In order to arrive at an understanding of catalysis, it seemed logical in the present work to arrange the findings of the various workers in the field and their original interpretations into a systematic presentation of the subject with some consideration of its historical evolution. The book has been divided into chapters, each pertaining to a particular branch of the field significant in itself and at the same time related to the general subject of catalysis. This will permit the reader to visualize a logical thread running through the field of catalytic chemistry, thereby simplifying and facilitating a critical analysis of the available experimental facts. Contents: Chapters I—The Phenomenon of Catalysis; II—Adsorption and Catalysis; III—Heterogeneous and Homogeneous Catalysis; IV—The Activity of the Catalyst; V—Inhibitors in Catalysis; VI—Promoters and Poisons in Catalysis; VII—Carriers in Heterogeneous Catalysis; VIII—Catalytic Reactions in Inorganic and Organic Chemistry; IX—Physical Conditions in Catalytic Reactions; X—Classification of Catalysts with Respect to Type of Reaction; XI—Catalysis in the Petroleum Industry.

Sales Control By Quantitative Methods, by R. Parker Eastwood, 311 pp., Columbia University Press, New York, Cloth, $3.50.

How to keep the twin processes, specialization on the one hand and coordination on the other, moving at the same pace constitutes one of the major economic problems of our time. The productive activities among specialized business units are coordinated through the synchronizing force of markets and price relationships. Within each business enterprise the system of exchange gives way to a system of conscious control. The specialized functions of selling, purchasing, production, personnel management, and financing are coordinated through various managerial techniques. The most important of these is the business budget and the keystone of the budgetary arch is sales. Hence, to establish a body of methods by which sales may be more effectively estimated and controlled becomes the most cogent business facing the managers of private enterprise. That is the general objective toward which this study is directed. Contents: I—Origin and Meaning of Budgetary Control; II—The Place of the Sales Budget in the Budgetary System; III—The Classification of Sales and Costs; IV—Ration Analysis of Sales and Costs; V—Functional Analysis of Sales and Costs; VI—Measurement and Prediction of Long-Term Forces Affecting Sales and Costs; VII—Measurement and Prediction of Medium and Short-Term Forces Affecting Sales and Costs; VIII—Purpose and Scope of Market Analysis; IX—Methods of Collecting Market Information; X—The Theory of Sampling as Applied to Market Data; XI—Statistical Methods of Testing the Significance of Market Factors; XII—Statistical Methods of Testing the Adequacy of Market Samples; XIII—Methods of Analyzing Market Data; XIV—Types of Market Indexes and Methods of Construction; XV—Combination and Application of Analyses.

Teaching Wholesome Living, by Alma A. Dobbs, M.A., 304 pp., A. S. Barnes & Co., New York, Cloth, $2.50.

This important book is based on the fundamental premise that children should be encouraged and be taught to grow in all ways. The author has treated her subject in three parts—Part One discusses the point

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of view as regards principles of growth and fostering child growth—Part Two discusses the curriculum as regards general consideration, instruction and emphases—Part Three outlines specific phases describing the common life activities of the child with particular reference to the determination of the quality of living.

Ephraim's Inorganic Chemistry, by P. C. L. Thorne and A. M. Ward, Third English Ed., 911 pp., Nordeman Publishing Co., Inc., New York, Buck., $8.00.

In this edition the general scheme, which proved such an attractive feature of earlier editions, has been maintained. The whole of the text has been thoroughly revised and established advances have been included. In particular, free use has been made throughout of modern concepts and notation of valency. Portions of the book dealing with radioactivity, isotopes and the rare earths, which were in the nature of appendices in earlier editions, have been transferred to more logical and useful positions. Contents: Part I—The Elements —1. The Structure of Matter; 2. Properties of Elements —The Periodic System; 3. Radioactive Elements and Isotopes; 4. Modifications of Elements—A. General 5. Modifications of Elements—B. Special; 6. Preparation of Elements—Non-Metals; 7. Preparation of Elements—Metals. Part II—Halogen Compounds—8. Hydrogen Compounds of the Halogens; 9. Halogen Salts—General—Univalent Metals; 10. Halogen Salts: Bi- and Ter-Valent Metals; 11. Merner's Co-ordination Theory and the Ammines; 12. Halides of Quadri-, Quinque- and Sexa-valent Metals; 13. Oxygen Compounds of the Halogens. Part III—Oxides of Hydrogen and of the Metals; 14. Water and Hydrogen Peroxide; 15. Oxides of the Alkali and Alkaline Earth Metals: The Rare Earths, 16. Basic Oxides of the Heavy Metals, 17. Metallic Oxides—Acidic; 18. Metallic Oxides—Acidic. Part IV—The Compounds of Sulphur, Selenium and Tellurium; 19. Hydrogen Compounds of Sulphur, Selenium and Tellurium; 20. Oxygen Compounds of Sulphur, Selenium and Tellurium; 21. Oxygen Compounds of S, Se, Te (Contd.): Halogen Compounds. Part V—The Nitrogen, Phosphorus, Arsenic Group; 22. The Hydrides of the Elements of the Fifth Group; 23. The Hydrides of the Elements of the Fifth Group (Contd.); 24. Oxygen Compounds of Nitrogen; 25. Oxygen Compounds of Phosphorus, Arsenic, Antimony and Bismuth; 26. Sulphur and Halogen Compounds of the Elements of the Fifth Group. Part VI—The Elements of the Fourth Group (and Boron); 27. Hydrides and Halides of the Elements of the Fourth Group: Oxides of Carbon; 28. Oxides of the Elements of the Fourth Group (Contd.): Sulphides; 29. Carbides, Silicides and Borides: Intermetallic Compounds. Appendix. Tables. Index.

Theory Of Cosmetology, by Anne Murray, R.N., 273 pp., Anne Murray Publishing Co., Hollywood, Cloth, $3.00.

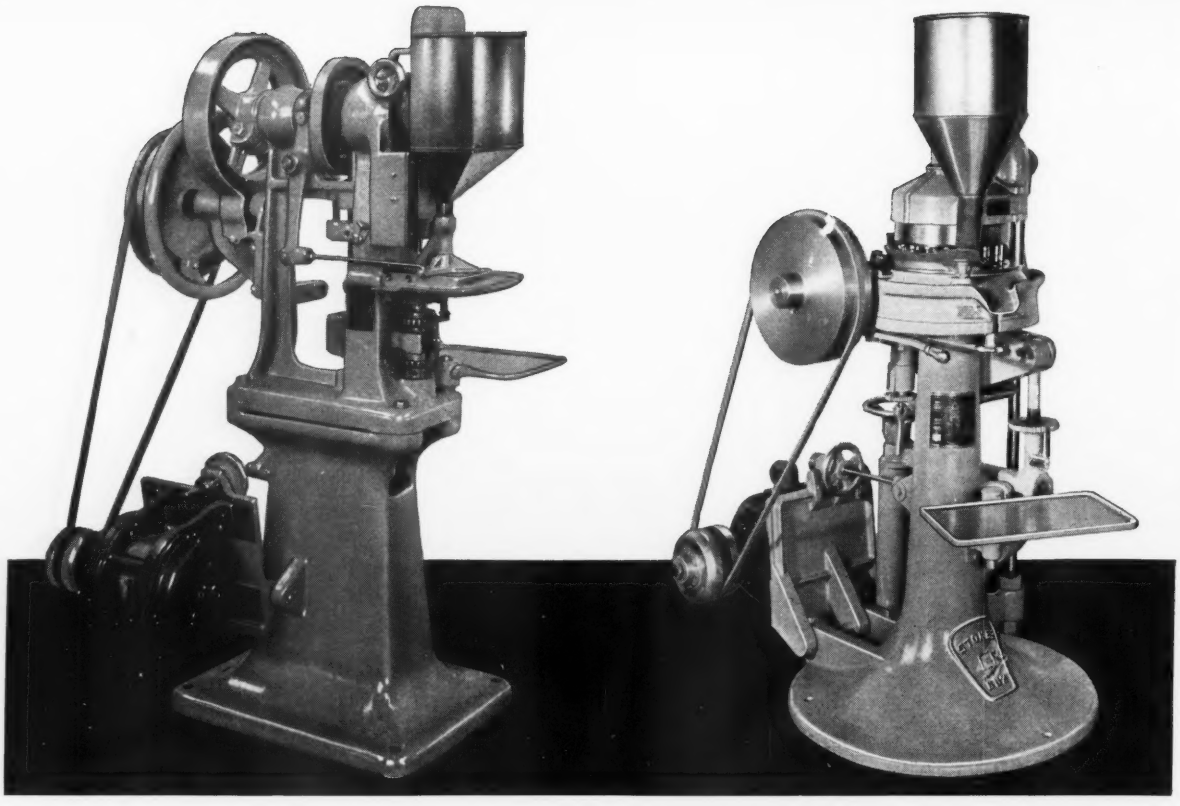
Anne Murray is founder of one of the largest colleges of beauty culture in California. Through her wide and varied experience in teaching this subject she was brought in contact with all that was wrong in previous methods of teaching beauty culture. Knowing well the importance of sanitation and hygiene, being a registered nurse, herself, she conceived the idea of imparting her knowledge and experience to the ambitious student in the form of a complete concise text book, the title of which is, "Theory of Cosmetology." Questions and Answers at the end of each chapter help greatly in the study of the subject matter.

The Merck Manual of Therapeutics and Materia Medica, Seventh Ed., 1462 pp., Merck & Co., Inc., Rahway, Cloth, $2.00 in U. S., elsewhere $2.50.

From an original 250 pages in 1899, The Merck Manual has grown to 1462 pages in the current edition and has been completely rewritten, rearranged and modernized. Each of the 256 chapters was approved by a specialist in his respective field, many of whom are professors in leading American medical colleges. The therapy was outlined by the late Dr. Bernard Fantus, Professor of Therapeutics, University of Illinois College of Medicine. Dr. M. R. Dinkelspiel, as in the case of the preceding edition, directed the editorial preparation of this edition. Among the new chapters are those on Bile Tract Disease, Circulatory Failure, Granuloma Inguinale, Granulocytopenia, Impotence, Hypoglycemia, Hypo-ovarianism, Obesity, Roentgen Ray Sickness, Lymphadenopathies, Jaundice, and Spirochetal Jaundice. Other revisions consist of those of the poison and antidote table and the materia medica section. The dose table continues to include official items revised or added since the preceding edition, and, as an additional source of information, many drugs little or no longer used. Symptomatic manifestations are represented by chapters on Anemias, Acute Delirium, Dyspnea and Cyanosis, Fever, Insomnia, Jaundice, Neuralgia, Neuritis, Pain, and Vomiting. The chapters discussing Psychoses and Psychoneuroses have been elaborated by distinguished authorities. The prescription constituents, as a rule, have been restricted to official drugs with the nomenclature of the Eleventh Edition of the United States Pharmacopoeia and the Sixth Edition of the National Formulary. The Merck Manual is intended for physicians, dentists, pharmacists, chemists, nurses, and those in allied professions. The fact that this work is published on a non-profit basis makes the very low price possible. Needless to say this book should be in the library of everyone in this industry.

The Self-Examiner In Theory and Practical Cosmetology, by Anne Murray, R.N., 95 pp., Paper Binding, $1.00.

This booklet consists of two thousand state board true and false questions and answers covering every phase of cosmetology, carefully arranged to assist students in preparing for State Board Examinations.



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F.J.Stokes TABLET MACHINES PHARMACEUTICAL EQUIPMENT FJS Est. 1895

PRODUCTION FORUM

BY Francis Chilson
PRODUCTION ENGINEER

EMPLOYEE TRAINING

We have been doing a good deal of reading lately about methods of training employees and we are beginning to feel that many of the methods advocated by advanced thinkers in this field are eventually going to lead to a degree of regimentation that may be disastrous. Some firms are making health examination mandatory. This is a good idea, provided it is conducted in a manner which does not give an employee the impression he is being guinea pigged. Other firms are employing psychologists to examine the bumps on their employees' heads to make sure that only potential Einsteins are employed. The ideal implied in psychiatric examinations is excellent because, as we have pointed out on numerous occasions, before, one of the criminal wastes in industry consists in our inability to utilize efficiently all the brains at our disposal. It is certainly a truism to say that one very frequently encounters laborers far more innately intelligent than the men who are their bosses.

Another element affecting personnel relationships consists of the increasing degree to which workers are stop watched. While we have nothing against the use of motion study methods to evaluate particular operations, we are afraid of the extremes to which such methods are sometimes carried. We also are worried about some of the practices which occasionally develop from motion study programs excessively applied. In some plants we have seen messenger boys riding around on scooters, roller skates, and bicycles. The appearance of toys in a plant seems incongruous and our observation has been that they are invariably looked upon with ridicule by the workers. Ridicule is often followed by resentment because it is obvious that such devices, while they cut down the time of messenger boys somewhat, really save very little for the companies employing them and are likely to give the impression that the management is anxious to speed up even relatively unimportant operations to a ridiculous degree. It seems to us that when it is important enough to save the time of a few messenger boys a pneumatic tube system had better be installed.

In one instance we actually saw a messenger being followed by an overzealous time study man who was anxious to determine exactly how long it took to deliver messages to different departments. The messenger was embarrassed by his escort and both were being ridiculed by all the workers in the plant. Judging from the sarcastic comments made from time to time, it was evident that beneath the ridicule there was a definite undercurrent of resentment.

My own efforts have been dedicated to securing maximum operating efficiency in manufacturing plants without regimenting workers to a point where they will lend a willing ear and readily assent to the claims of any and all communist and fascist agitators.

PORTABILITY

In order to eliminate the use of pumps and to save washing time, I have observed that some plant managers have made their equipment portable to what seems to be an uneconomic degree. When equipment is small and light and can easily be handled by one person, there are many occasions when it is desirable to make such equipment portable. When equipment is very heavy and especially when it requires heavy power wiring, the question of making it portable should be examined carefully. In one instance we saw a big

Convenience for the User – Protection for the Product

EASY-OPENING Wrapping has real Sales Appeal

In the drug field, as well as in other fields, easy-opening wrapping is finding strong favor with the buying public.

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As you will see from the examples above, we adapt the wrapping to the nature of each product and the easy-opening device is incorporated with the wrapping in such a manner that the package is *completely and firmly sealed.* You therefore obtain not only the utmost convenience for the user, but also the utmost protection for your product.

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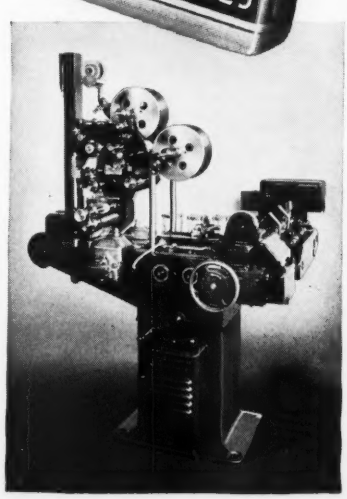
Consult our PACKAGING CLINIC
for free assistance on your wrapping problems.



PACKAGE MACHINERY COMPANY, Springfield, Massachusetts

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powder mixer mounted on casters which was so heavy that it took two men to move it into the required position. Then a heavy cable had to be hooked up to the power outlet before the operation could proceed. Judging by the time that it took to maneuver the ponderous piece into position, it struck us that it would have been quicker to dump its contents into a light portable bin of some sort, even though the bin would have to be cleaned at the conclusion of the operation.

In packaging departments one frequently sees large tables made portable. When a table is too long to be guided easily from one end, the desirability of making it portable is open to question.

INDIVIDUAL DUST COLLECTOR

For individual dust collecting applications such as tablet cleaners and the like, your attention is called to the device made by Torit Mfg. Co., St. Paul, Minn. These are cloth leaf type filters and have a high capacity and are very compactly designed.

TANK LINING

A plastic coating known as Amercoat used to line tanks and other types of equipment has been developed by American Concrete and Steel Pipe Co. It is said to withstand the action of highly corrosive materials. It has been used in the food and beverage industries where the material is brought into contact with tannic, acetic, and citric acid solutions. It might be worth your while to obtain a sample of this material for experimental purposes.

WASTE COLLECTION

Edwards Mfg. Co., 2340 N. Dort Highway, Flint, Mich., sell a ten quart wax paper bag held in a stand in a closed position, the stand being so designed that pressure on the foot pedal opens the bag for the insertion of waste. Since the bags furnished are made of waxed paper or parchment, they are recommended for the disposal of fluid wastes, broken bottles, etc. Although the bags in this particular application are too small for general waste disposal in a packaging department, the idea of using a stand of this kind is appealing and there is no reason why you could not devise a larger stand of your own to hold very large paper or burlap bags. The bags could then be collected, dumped, and reused or, if you are dealing with paper waste exclusively, the bag and its contents could be thrown into the scrap paper baler.

DRUM TRUCK

Morse Mfg. Co., Jefferson and Franklyn, Syracuse, N. Y., have devised a hand truck designed to pick up drums and to tilt them so that liquids can be run out of a spigot inserted in the tops. In other words, this devise is both a drum truck and a dispensing cradle and it can be used in chemical stock departments for dispersing all kinds of liquids.

FLOOR DYE

Designers of laboratories are always on the alert for materials which will withstand the corrosive action of concentrated acids and alkalies and which will have a permanent color. The Flexrock Co., 2300 Manning St., Philadelphia, make a new die which is available for staining wood floors and laboratory furniture and is made in a variety of colors. It is claimed that this material will withstand concentrated sulphuric acid as well as sodium hydroxide. It is also claimed that alcohol poured on the floor which has been treated with this dye can be ignited and burned off without actually affecting the appearance of the dye in any way. It sounds too good to be true but you might look into it.

MIDGET PUMP

Eastern Eng. Co., 45 Fox Street, New Haven, Conn., have introduced a new midget sized pump capable of a pressure of 25 lbs. per square inch and having a maximum volume of 3 gallons per minute based, presumably, on water. This little gadget is a rotary pump and in spite of its diminuative size has sufficient capacity for many liquid department needs.

DRUM TIPPER

Vol-U-Meter Co., Buffalo, N. Y., specialists in the manufacture of equipment for handling drums of various kinds, has now developed a device for dumping drums. The unit consists of a welded iron frame forming a fulcrum for a long lever. The lever is provided with clamps for attachment to the drum and a dog is provided so that the tilted drum can be held at any desired angle.

WEIGHT CHECKING

Fred Goat Co., 314 Dean St., Brooklyn, N. Y., have introduced an automatic package check weigher which is designed for insertion in standard packaging lines and which is used for automatically ejecting packages which are under standard weight. This ejector will handle containers at a rate of 60 or more a minute and its

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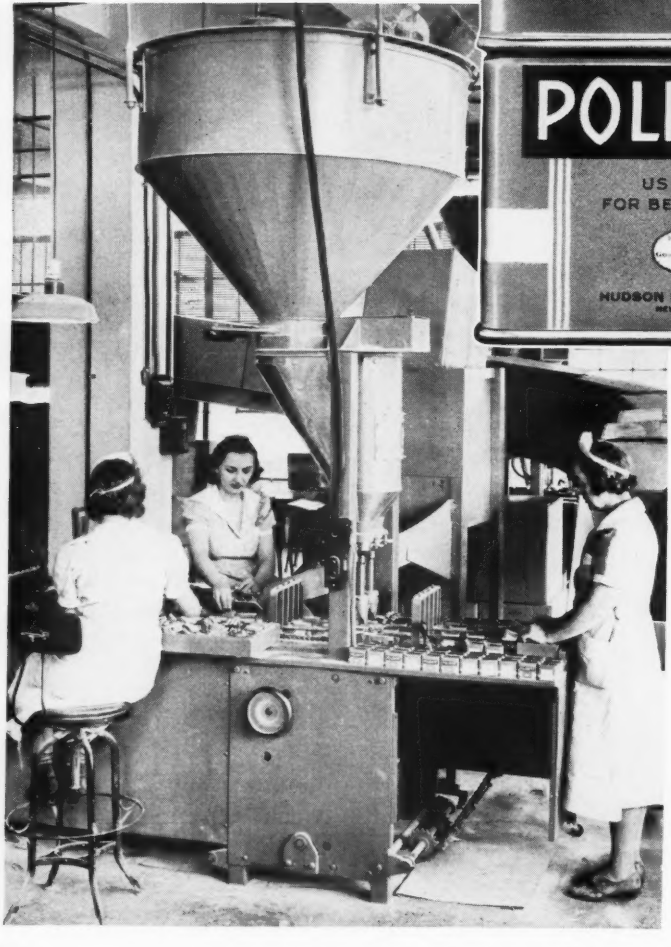

As shown above and at left below: At Hudson Products, Inc., one operator feeds empty cans onto conveyor . . . cans are filled two at a time . . . operator places lids on cans, machine presses lids firmly in place.

60 to 70 per minute!

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capacity depends to some extent upon the gross weight of the container. The device is so designed that the package is weighed against a standard weight and an upward movement of the square pan indicating a light weight package operates an automatic ejector which kicks the light package out of the line.

DEVELOPING MEN

The present defense crisis has revealed a dearth of trained supervisors and of intelligent men capable of being trained for supervisory posts. The Government has made an appropriation for the use of colleges to provide free courses in production methods and planning. On the technical side the Government is making a census of technically trained men of all kinds. These efforts are reflected in the organizations with which we have had intimate contact. Because of the lack of a systematic method of locating and developing the more intelligent men in these organizations, the firms referred to are finding it difficult to fill supervisory posts. For the first time in many years there are more good jobs than there are good men to fill them.

It is a difficult thing for a man at the head of a large plant to make an accurate assay of the intelligence available in his organization because he is so often dependent upon the reports of subordinate department heads and foremen who in so many cases either lack the capacity to judge an intelligent man fairly or are prejudiced against him because he is intelligent. Training courses which are open to all employees whether engaged in supervisory or ordinary tasks furnish one means of selection when the courses are conducted by the principal executives of particular firms instead of by professional teachers.

Howard Sumner of the Norwich Pharmacal Company has developed a method of locating talent which is as intelligent as it is novel. From the reports of his subordinates and from personal inspection tours through the plant as well as from the plant grapevine, Howard gets a line on some boys who seem to have more than average native intelligence and ability. He then calls a group of these boys together and gives them a specific problem to work out. Always it is a specific Norwich problem and not a theoretical one not connected with the business. It might be in one case a packaging problem, in another case a machinery problem, and although it always has something to do with the business in general, it invariably has no connection with the departments in which the boys in the group are connected.

Howard tells them he would like their assistance on a certain job and he then asks them to work it out and at some later date to turn in individual reports concerning it. Howard does not give two hoots as to whether or not they arrive at the right answer. He is interested in judging each man's mental processes as applied to a specific problem and his attitude in general toward the problem and the company as a whole. This method strikes me as being very sound from a psychological standpoint because the boys selected naturally are flattered with the thought that the big boss has asked their opinions on a problem of the business. They also are eager to do a thorough going job so as to justify his faith in them. Howard told me the last time he was in New York that he had already gotten a line on a couple of boys of more than usual ability.

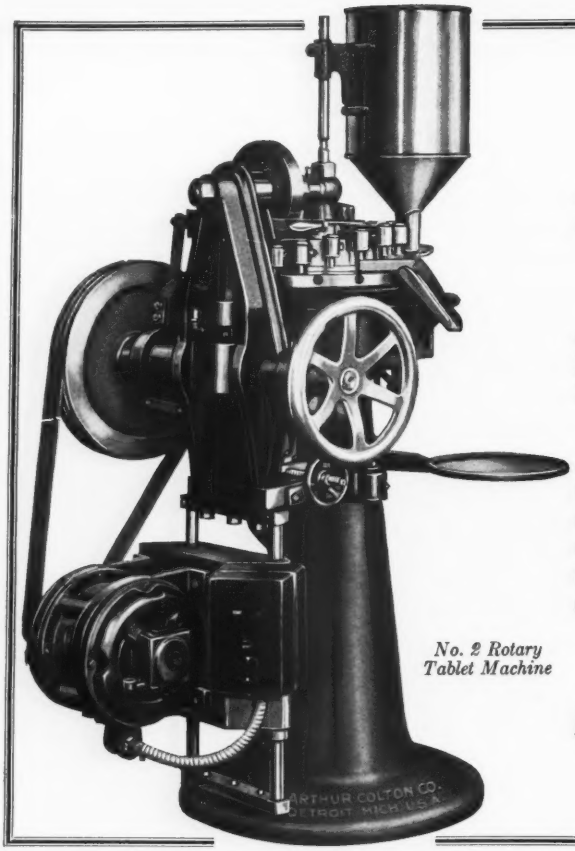
This method implies, of course, going over the heads of subordinates to reach the individual workers and in plants where there is a good deal of internal politics and jealousy such an approach might cause a good deal of rancor. But in this day and age the old shibboleths regarding straight line organization principles are being dumped into the ash barrel. There is plenty of talent in industry if we can only devise methods of keeping it from going to waste.

LIQUID CONDITIONING SYSTEMS

Last month we discussed the Kathabar method of air conditioning but we neglected to mention one important factor applying to all liquid air conditioning systems. A number of devices employing liquids have been used and in some instances they have been extremely successful, but in other applications they have been equally unsuccessful because of corrosion caused by galvanic action. It is axiomatic that when air is passed through a chemical solution, the chemical solution itself will be affected by the dust picked up from the air. In some instances impurities in the air have been of such a nature as to convert the chemical solutions into an electrolyte with the result that the equipment corroded out in a very brief time. Liquid systems also are influenced by the character of the local water supply, in conjunction with which it must be used. Our own experience and observation is such that we doubt very much if the dry Lectrodryer method can be beaten.

DRYING

Truck and shelf dryers give highly variable performance results because so many dryer builders feel that all there is to the drying problem consists in the circulation of hot air and they fail to provide in the construction of their dryers means of accurately regulating vapor pressure. This has as much to do with thorough and rapid drying as the circulation of a vast quantity of air. In this connection the dryers made by J. O. Ross Eng. Co., 350 Madison Ave., New York, have given excellent service where we have used them. For instance, in one case pills that formerly took six days to dry were dried in four hours without case hardening. Yesterday had lunch with V. P. Victor, the Mad Monk of the air conditioning industry and shining light of the Ross Company. Vic was in unusually high feather because a battery of dryers just installed in the trade had reduced drying time on a certain product(of which you will hear more later when news on it is officially released) from thirty-five days to five days. When Victor is in high feather, he is a sight to behold. At such moments all he needs is a knife in his teeth and a horse to ride upon—



No. 2 Rotary Tablet Machine

New and Improved!

We have no yearly models—but improvements and refinements are being constantly added to Colton machines.

There are over five hundred Colton Rotaries in use.

Superior design, sturdy construction and ease in operation, along with the change from the old type Electric Drive to the new, improved, Tex Rope Drive, have made this possible.

The No. 2 Rotary Tablet Machine has such desirable features as *positive pressure*, eliminating varying thicknesses of tablets; *hardened steel gear drive*, eliminating frequent replacement of worms used on other makes, and *sliding upper punch holders*, to hold the punches rigidly, enabling the manufacture of special shaped tablets most satisfactorily.

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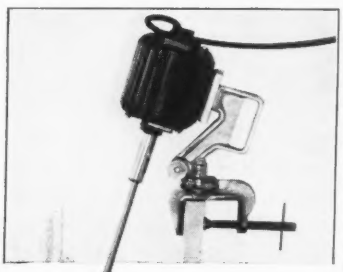
Really
HERE'S A GOOD MIXER



It's the *new* ERTEL SWIVEL JOINT MIXER—its development based on ERTEL'S experience with various makes and types of mixers. Find out now how the ERTEL SWIVEL JOINT MIXER can increase efficiency and minimize accidents in your mixing department.

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even if it is only a wooden one—and he reverts back to his wild Cossack days. But notwithstanding he really is a good egg and an unassailable authority on drying.

EXTRACTION

Some time ago we mentioned in this department the applicability of the Redler conveyor to extraction problems. We knew that the Redler had been employed for the extraction of cocoa beans with a solvent, but because this extract is oleaginous, we were not sure that a Redler conveyor would handle the wet soggy and alcoholic masses with which our trade has to deal. The Redler people, however, tell me that they can handle wet masses in properly designed Redler units. Since a number of the firms extract cascara in large quantities, it would be a very simple matter to design a continuous extraction system with the Redler as the basis. Such an application would be particularly desirable in a building having good headroom or in a multi-story building.

A mixer could be set up to moisten the drug and to feed it directly into the loading boot of the Redler unit. Water of the proper temperature could then be introduced into the top of the conveying channel at a certain distance below the discharge point. The drug being conveyed slowly upward would meet the downcoming water, thus providing countercurrent extraction and the hot extract could be taken off at the bottom of the boot through appropriate strainers. By insulating the boot, the extract could be kept hot thus avoiding the rancidity sometimes encountered in summer. Depending on the speed of the conveyor and the distance between the point at which the hot water is let into the channel of the conveyor and the marc discharge at the top, the requisite amount of draining time could be provided.

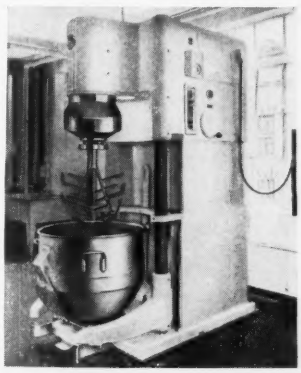
The capacity of the Redler conveyors, of course, depends on chain speed and the size of the channels but these can be designed to suit requirements. In particular instances instead of using one large conveyor unit, a series could be employed to advantage and they could be connected together in such a way that the marc discharged from the one would pass through another. It would of course take longer to extract drugs requiring alcoholic menstruums than those needing water, and, since the equipment has not generally been used in this trade, it would be advisable to confine your experiments to water extractives until the bugs have been ironed out of the method.

HEAT EXCHANGER

Sometime when you are confronted with the problem of cooling condenser water or any other heat exchanger problem, you will be interested in investigating the Harrison heat exchangers made by Harrison Radiator Division of General Motors Corp., Lockport, N. Y. These are the smallest large capacity heat exchangers we have ever seen. We have used these in connection with Nash pumps on vacuum stills for cooling the spray water with which the pump is primed and lubricated. The cooling element in these heat exchangers consists of a series of small tubes of strut type design which provides an immense area of cooling surface. The tubes are surrounded with the cooling liquid and the liquid to be cooled circulates through the tubes.

VERTICAL MIXER

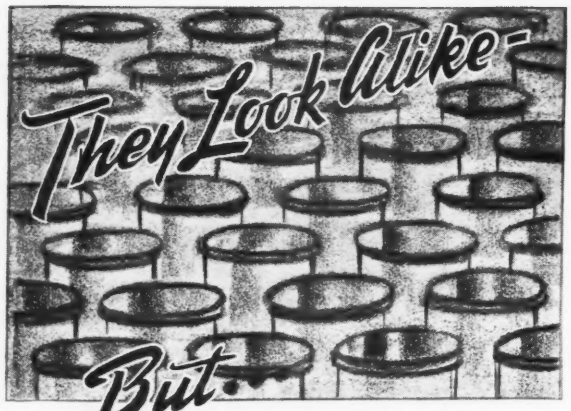
American Machine and Foundry Co., is offering an addition to its line of mixers so extensively used in the bakery trades. This is a removable bowl type, vertical



mixer with a variable speed drive and is recommended for mixing facial creams. tooth pastes and tablet granulations. The bowl and mixing elements are made from stainless steel and the entire job is beautifully finished.

GRANULATION MIXING

As we have mentioned in the past the best way to make a tablet granulation is to use a tilting mixer equipped with double sigma type mixing blades. Such a machine enables you, when the granulation is mixed, to tilt the bowl forward so that the granulation can be scooped directly into a portable granulator, set up immediately adjacent to the mixer. Then by placing the tray rack at a right angle to the granulator, the operator can granulate and tray up a batch without bending his back or making a great many steps. However, this method is applicable to large batches particularly and is to some degree inflexible because the mixer is tied up for the duration of the granulating and traying time. In the average tablet department this slight degree of inflexibility is unimportant but in some instances where a great variety of small lots are made, a properly set up pony mixer may be more flexibly used. I say "properly set up" advisedly because we have never yet seen a pony mixer properly set up. As an invariable rule they are mounted directly on the floor so that the operator is forced to work in a bent-over position, whereas the pony mixer base should be mounted on a pedestal so as to bring the top of the mixer can about 42 inches from the floor. For such a mounting the new tilting head type pony mixers are infinitely preferable to the older types which are equipped with high columns to permit the raising and lowering of the agitator heads. When using a pedestal mounted pony mixer and a small portable stand of a height equal to the top of the mixer base, the



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Due to unavoidable variations in container capacity, it is possible for slightly oversize containers to appear to be scantily filled. To customers this instantly indicates short weight or short measure. The result — dissatisfaction and customers lost without known causes.

All these conditions are completely eliminated by this FMC Special Filler which gives you

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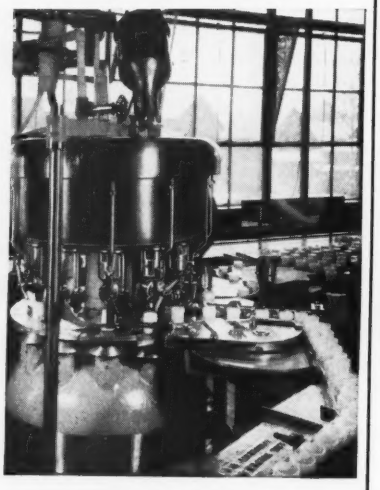

You never have seen anything to compare with the filling accuracy of this machine! Control valve automatically allows for jar capacity variations... No underfilling or overfilling . . . No smeared jars, caps, belts or labels... No costly human errors... No slow filling or cleaning by hand.

ASK FOR THIS DEMONSTRATION!

Send us a quantity of your product and containers. We will fill them with FMC Special Filler and send to you — or you can have one of your Representatives present to watch the filling operation. And we'll tell you *how fast* one operator can fill them. *No obligation.*

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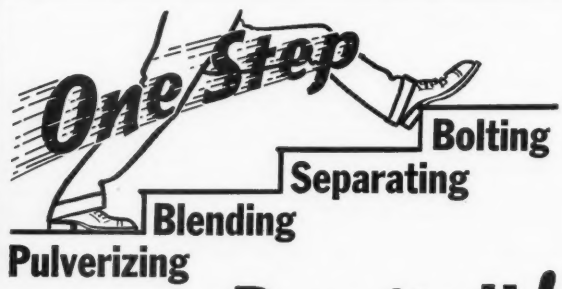

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You will be impressed with the time and labor savings possible with the One Step Mikro-Pulverizer. One pass thru the mill generally results in a finished product, pulverized and blended — no bolting or separating necessary.

The One Step is dustless (no fans or cyclones). Performance guaranteed. A size for every job. Write for new 32 page booklet.

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can of mixed granulation can be pulled off on the stand and set aside while another can is reloaded. The first can may then be pushed to the granulator and the granulating and traying operation can proceed while the second lot is being mixed. By this method it is possible to maintain a high degree of flexibility and to keep the equipment in operation almost continuously while at the same time allowing the operator to work in an upright position. But this method is not recommended for large batches because the cans, if made large enough to handle the entire batch, are too heavy to transport and, if made small enough to transport, too many mixings must be made to turn out the complete batch.

SMALL EQUIPMENT

Every now and again a small cosmetic manufacturer will ask me where to get equipment for making very small lots of all kinds of preparations. Similar questions arise in connection with the equipment of pilot plants in laboratories. It is difficult to get laboratory size equipment from the usual sources because manufacturers of commercial size units seldom make the diminutive sizes. You can get almost everything you want from firms which specialize in hotel and restaurant equipment. In New York for instance there are a great number of such firms located around Cooper Square and their show windows exhibit a variety of pint size machines. You can get two quart steam jacketed kettles, water baths, sieves and sifters, mixers for liquids, pastes and powders; you can get presses and grinders, tanks, percolators and double-boilers. After all the preparation of food products is not very different from the preparation of cosmetics and pharmaceuticals and if you can look over restaurant and hotel equipment with an eye for operating principles you will certainly pick up enough lilliputian equipment to suit your purposes.

ANNIVERSARY

This January we are starting the eleventh year of our entry into the consulting engineering field. It has been an interesting decade. The first two years were pretty lean and we grew calluses on our can from sitting in a chair waiting for business to start rolling in. But the third year opened with a boom and business for us has been booming ever since. The best part of our work consists in the permanent friendships which we have made on every job we have ever had. Enemies have been made, too, as an inevitable part of the work. People whose jobs were eliminated do not regard us as their patron saint exactly. And there are a few equipment dealers who'd like to see us guillotined because we kept them from selling our clients equipment that was unsuited for particular jobs or could be purchased from other sources more advantageously. It is difficult for salesmen to appreciate that the interests of the client always transcends all other considerations. It is even more difficult for them to see that other firms build better equipment than they do. This is natural, but it makes it very difficult for us not to arouse bitterness in the salesman who loses an order. We must confess that it hurts us too when the necessities of a particular job force us to pass up personal friends in the equipment business and to recommend the equipment of their competitors. But its all in the game and there's no changing it. It is gratifying, however, to look back and to know that we've never had a job go sour or a dissatisfied client. One blunder in this gossipy trade would sink us.

VITAMIN A PHOTOMETER

The Bills and Wallenmeyer Electronic Photometer is designed for determining Vitamin A concentration. Its operating principle is the measurement of the ultraviolet light absorbed by a Vitamin A solution. A phototube and electronic amplification are used to carry out this measurement.

With U.S.P. Reference Cod-Liver Oil used for calibration, the dial indication of the Photometer permits reading the vitamin units contained in a sample directly from a chart without computation. The useful measuring range covers the widest variations encountered in any one species of commercial fish oil. The time required to make a reading of a given sample is about 90 seconds. The instrument is a self-contained unit built into a single cabinet. It can be carried in a carrying case and operates from any 110 volt 60 cycle socket.

The light source of the Photometer is an argon glow lamp having strong emission bands, at about 318 and 338 millimicrons, which are well within the Vitamin A absorption band and close to its maximum. These lines are isolated from the rest of the argon spectrum by means of a filter which has been especially developed for the purpose of absorbing all other light to which the phototube is sensitive. The circuit is fully compensated for changes of the light intensity caused by line voltage variations. A two-stage amplifier provides the required sensitivity and an accurately calibrated logarithmic aperture serves for balancing the circuit. The logarithmic aperture gives a linear calibration curve and is operated by a knob which is connected to a dial graduated in 100 equal divisions. The readings are reproducible within 0.5% over most of the useful range.

The Photometer can also be used, without changes or special equipment, for estimating Vitamin B_1 (by the Melnick and Field adaptation of the Prebluda-McCollum color reaction).

This device is distributed by Photovolt Corporation, 10 E. 40th St., New York.

FLOOR SCALE

Exact Weight Scale Co., Columbus, Ohio, has introduced a floor scale with a novel feature in the form of a revolving scale tower, the dial of which is set at an angle so that it can be read at any point. This looks like a good bet for a chemical stockroom.

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MAKE A BETTER CREAM WITH PENN-DRAKE WHITE OILS!

Give your preparations the sales-building smoothness, penetrating power and brilliance your customers demand, by standardizing on PENN-DRAKE White Oil. Here are seven practical, proven advantages you get in PENN-DRAKE:

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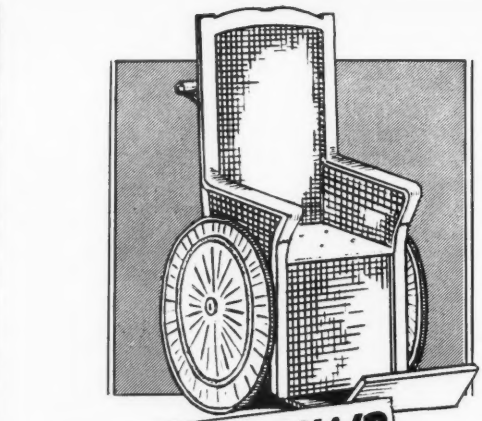

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TALC—ISCO TRINITY TALC
Its good qualities and dependability make strong appeal to those seeking a high grade talc.

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That good product that finds high favor with manufacturers of Face and Talcum Powders.

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BRITTLENESS OF NAILS

To correct a possible misunderstanding on the part of our readers, we now state that the article which appeared in our December issue, "Brittleness of Nails" by Henry Silver, M.D. and Bernard Chiego, Ph.G. was reprinted from "The Journal of Investigative Dermatology" without permission from either the publisher or the authors. It is our policy to bring to the attention of our readers all possible material that might be useful to them in their efforts to produce better drugs and cosmetics, and we considered this particular article an important contribution to an important subject. We very much regret that Dr. Silver, Mr. Chiego, and the Williams and Wilkins Company feel that they may have been placed in an anomalous position by our use of the article in this way. We wish further to advise our readers that no part of this article may be used directly or indirectly for any commercial or promotional purposes.

COLLORESIN

Colloresin is a dry fibrous mass, which on being dissolved in water, gives a uniformly viscous solution, free from lumps. The solution is colorless or slightly yellowish, and can replace many of the natural gums.

The solutions are perfectly neutral and are stable in any concentration. They do not ferment, form mildew or turn acid, and when pure (distilled) water is used they do not require a preserving agent. They are stable against alkalies of any concentration, both in heat and cold and against dilute mineral and organic acids at low temperatures. The more the solution is cooled, the clearer and thicker and more productive it becomes. The colloid is not destroyed even if completely frozen. Above 120° F. there is a tendency to coagulate.

The solution is free from impurities. Owing to the resistance of the product to chemical effects, it is not decomposed by an acid reaction in the stomach, nor when the intestines react alkaline. It is completely harmless for men and animals, nor does it cause any injurious effect on the skin.

A stock solution or jelly may be made by pouring 15 parts of boiling water over one part of Colloresin; stirring thoroughly till the mass swells and all lumps disappear. The solution is then cooled to 50 to 60° C. and allowed to stand for some hours, after which it is again thoroughly stirred.

This stock solution can then be diluted with cold water as desired, care being used to add the water slowly while the mass is being stirred.

Colloresins are primarily used as dispersing and emulsifying agents, also as thickening and binding media, and therefore are preferably employed for the production of emulsions, for cosmetics and also for the manufacture of shoe finishes, etc. They exercise on pigments of all kinds an unequalled dispersing effect, cause them to be most finely distributed effectively and retard their sedimentation.

It may also convert oils, fats, paraffins, etc., into extraordinarily fine and stable emulsions of the "oil-in-water" type. Such emulsions after the usual homogenizing have very fine appearance which is an outward sign of a very effective dispersion into very small drops.

Owing to the various viscosity grades the thickening effect can be greatly varied and all requirements can be satisfied, the highly-viscous grades surpassing the thickening ability of most natural products which were used formerly.

Colloresin will be appreciated in cosmetic preparations wherever a natural product is to be replaced by a synthetic one, and which is unaffected by the various effects and which at the same time has high emulsifying, dispersing and binding properties.

Skin creams, depilatories, hair tonics, pastes for cleansing the hands, etc. are such products.

When oils, paraffins, greases, etc. are emulsified with Colloresin, emulsions of the type "oil-in-water" are obtained which have both a nice appearance and are stable for practically any length of time. Liquid oils are emulsified cold, solid substances are at first melted and stirred into the Colloresin solution which has been heated to the same temperature.

In pharmacy Colloresin serves admirably as a thickening or binding agent, and as an emulsifying or dispersing agent. In suspending insoluble oxides, carbonates and hydrates, as for example in Lotions of Calamine, Magma Bismuthi, Magma Magnesiae, or in an Aluminum Gel, Colloresin replaces the more expensive Gum Tragacanth.

The usual procedure in using Gum Tragacanth as a suspending agent may be followed for Colloresin employing seventy grains to the pint or 10 grams to the litre.

With simple pharmaceutical tools such as a mortar and pestle or hand homogenizer, oils, fats, waxes and paraffins may readily be emulsified by Colloresin. The products so prepared are completely harmless to man and other animals, when applied internally or externally. Solutions are free from impurities, and as Colloresin is resistant to marked pH changes, they are not decomposed by the stomach's acid reaction nor by the alkalinity of the intestines.

Because it is simple to prepare, is resistant to the effect of heat, cold and light and is impervious to bacterial decomposition, Colloresin makes a valuable contribution to pharmaceutical procedure.

Viscosity Grades of Colloresin

Extra Low	15	Centipoise	Units
Low	25	"	"
Medium	50	"	"
High	100	"	"
Extra High	400	"	"
Extra Extra High	1500	"	"
Colloresin 4000	4000	"	"

General Drug Company, New York, N. Y.

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QUALITY IN NAIL ENAMEL
depends on the producer's Resources, Experience and Technical Equipment.

THE DURLIN CORPORATION is the most experienced producer of Nail Enamel. Our technical resources are very extensive and our intimate knowledge of the trends and fashions of the Nail Enamel industry are always at the disposal of the trade. That's why **DURLIN NAIL ENAMELS** are the most talked about.

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Since the introduction of this new face powder material sales of it have constantly increased because the use of it actually represents a development in fine face powders.

Its exceptional silky, soft, smoothness, the complete absence of odor and the extremely fine particle size of it, plus its extraordinary adhesiveness actually improves a face powder in which it is used. As little as 5% added to your formula will bring about this result although it is being used in some face powder to the extent of 15% and a formula is offered showing its use in this percentage.

Samples are at your disposal and we believe that this is one of the Plymouth products which warrants a serious investigation by every face powder manufacturer because it has real merit.

•

A complete line of Cosmetic Raw Materials

STILBESTROL

One hundred and twenty-five patients with surgical and natural menopause were treated from two weeks to six months with doses ranging up to 60 mg. of stilbestrol. In 75 per cent. of the cases excellent or good results were obtained, with 39 per cent. of the patients reporting better response to this therapy than to any other estrogenic substance used previously. In 42 per cent. of the patients some untoward symptoms appeared during the therapy. These, however, could be controlled in the majority of cases by reducing the dose, and the treatment had to be discontinued in only 9 cases.

Laboratory investigation did not reveal any evidence of organic injury. Ten to 30 per cent. of the ingested stilbestrol was excreted in the urine and feces during the first ten days following its administration.

Because of the ease of administration and the great economic advantages stilbestrol has a definite place in the treatment of the menopause provided that small doses are used and that the therapy is not continued over too long a time. *E. von Haam, M. A. Hammel, T. E. Rardin, R. H. Scholne, J.A.M.A. vol. 115, p. 2271.*

NAIL POLISH DERMATITIS

Considering the widespread use of nail polish and the few reports of dermatitis due to this cosmetic, one would infer that nail polish is a relatively unimportant etiologic factor of contact dermatitis. It is recognized that any of its ingredients may act as a sensitizer, but experience suggests that the more important factors are the clear lacquer and the dyes. Three patients gave positive reactions to the clear lacquer. This is cellulose nitrate dissolved in a mixture of volatile solvents. The volatile solvents are usually primary irritants because they are fat solvents capable of dissolving the sebaceous material, or fat, of the skin. However, when applied, covered with cellophane or uncovered, five control patch tests with the lacquer gave negative results. The dye in many of the cases was probably the responsible agent because the other ingredients usually gave negative reactions. The clear lacquer may have the property of synergic or potentiating antigenicity; briefly, this means that when the clear lacquer is mixed with another antigen it enhances or changes the antigenicity of the second substance (the dye). It is well recognized that persons with fungous, bacterial, atopic or contact dermatitis are prone to become sensitized to agents which they previously used with impunity. Some cases demonstrate that the ingredients in the foundation do not necessarily protect the patient from the finished product containing a dye even though negative reactions are obtained to the ingredients of the foundation of the nail polish. *Ellis and Kirby-Smith, J.A.M.A., vol. 116, p. 45.*

TREATING TRACHOMA

Lijo Pavia, head of the Argentine committee for the prevention of blindness, reports on sulfanilamide treatment of trachoma of three groups of twenty-six patients each. These groups included children and adults. The disease was of the first, second and third degrees. The patients were not hospitalized; they remained at home in order not to be exposed to the sun's rays. The drug (azosulfamide) was administered on fifteen consecutive days in a daily dose of 0.02 Gm. for each kilogram of body weight for the first five days, 0.03 Gm. for the next five days and 0.04 Gm. for the last five days. The treatment was sell tolerated. Photophobia, lacrimation, blepharospasm and conjunctival hyperemia showed improvement within the first five days of the treatment and generally disappeared in the course of it. Edema was reabsorbed, the pannus cleared and the transparency of the cornea and vision improved. The nodules became smaller and in some cases disappeared in the course of treatment or sometime after. Six patients were observed for three months after discontinuation of the treatment. Some of the patients instilled a drop of a 0.5 per cent. zinc solution or an eyewash of a weak solution of mercuric oxycyanide. All the nodules had diminished in number and size and in some instances had disappeared. The author believes that sulfanilamide has an immediate therapeutic action on trachoma and a late action on the remaining nodules, with the probable exception of cases in which there are advanced forms of the disease. The patients had the treatment too recently to enable one to predict the future behavior of the disease and whether or not the results will be permanent. *Arch. Oftal. Buenos Aires, vol. 15, p. 400.*

SULFAMETHYLTHIAZOLE

Brown and Herrell review their clinical experience with the use of sulfamethylthiazole in 30 cases of pneumonia, 7 of septicemia, 5 of acute bacterial endocarditis, 5 pelvic infections, 4 osseous infections, 25 cutaneous infections, 13 infections of the ear, nose and throat, 3 urinary infections and 14 cases of miscellaneous infections; a total of 106 cases. The drug was administered orally to the majority of the patients in doses similar to sulfanilamide and sulfapyridine. However, larger doses were frequently used for and tolerated by the severely ill patients. The sodium salt of sulfamethylthiazole was used intravenously for 3 patients and it significantly elevated the concentration of the drug in the blood. Sulfamethylthiazole orally produced concentrations of the free drug in the blood similar to but somewhat lower than those that result from sulfapyridine. A minimal amount of conjugation occurred with sulfamethylthiazole. The results obtained to date from its use seem to substantiate experimental predictions. Staphylococcus aureus and Diplococcus pneumoniae (type I) infections in particular seem to respond to treatment. With the exception of lower motor neuron involvement in 3 cases and of cutaneous eruptions in 9, toxic effects seemed to be less than those encountered following the use of sulfapyridine and sulfanilamide. Significant nausea and emesis occurred infrequently. The danger of lower motor neuron involvement makes it unwise to use sulfamethylthiazole for mild infections caused by Staphylococcus aureus. However, a fulminating infection which carries a high mortality rate far outweighs the danger of toxic manifestations from drug therapy, and this drug or a related preparation may be indicated. *Amer. J. Med. Sci. vol. 200, p. 618.*

FACE POWDER PUFF DERMATITIS

A curious case of dermatitis involving sharply defined areas of the face was traced by Dr. L. Hollander (J.A.M.A., vol. 115, p. 2271) to the use of cosmetics. Further testing could not locate the specific irritant which, however, was eventually discovered to be a rubber sponge powder puff. Although no further search was made by Dr. Hollander, it seems probable that the dermatitis was caused by accelerating materials in the rubber, so that manufacturers intending to sell rubber products for cosmetic purposes must question the composition of the rubber.

UREA AND DENTAL CARIES

Carbamide, a common chemical known also as urea and produced in the body from proteins as well as in the laboratory, may provide the weapon for eventual conquest of tooth decay or dental caries. It may itself become this weapon and is now being tested for its caries-preventing possibilities.

Discovery that carbamide can play a role in protecting teeth against decay was made by Dr. Robert M. Stephan, of the University of Illinois College of Dentistry. (*Science*, Dec. 20).

Carbamide's tooth-protecting ability depends on the fact that under the action of an enzyme called urease it is converted to ammonium carbonate. The latter is able to neutralize some of the acids which might otherwise produce caries activity.

Rinsing the mouth with a solution of carbamide (synthetic urea) has been found to change the condition of bacterial material on tooth surfaces and in cavities to a more than normal degree of alkalinity. At this degree of alkalinity, calcium phosphate tends to be deposited on the tooth from the saliva instead of being dissolved from the tooth. In other words, the teeth are not only protected from acids which take calcium out of them but are given additional amounts of tooth-building calcium, at least on their surfaces, if not within their structure. *Science News Letter, December 28, 1940.*

Perfumers Shelf

SYNTHETIC JASMIN

Synthetic jasmin has today become extremely important to every perfumer, since the natural oil is no longer obtainable from the flower fields of France. Also some of the materials which are necessary in the fabrication of the artificial product are rather scarce which means a revision of some of the types now present on the market by the substitution of other chemicals necessary in the formulation of a synthetic product. It will be recalled by some of the older perfumers that when amyl cinnamic aldehyde first came on the market under such names as Flosal of Descollonges Freres and Jasmonic Aldehyde of Verley that this material made a decided change in the synthetic jasmin offered on the market. Amyl cinnamic aldehyde made possible a truer conception of the natural flower product by its use in nearly every jasmin compound and today there is an extreme need for a similar product. Almost all jasmin synthetics contain some of the natural product depending upon its final application but with the extreme scarcity of the natural oil it is necessary that the manufacturer of aromatic chemicals collaborate with the manufacturer of aromatic products to attempt to develop other new aromatics or isolates which will improve the quality of the synthetic.

Another important part that synthetic jasmin must play is the extension of the present stocks of the natural flower oil. Our recommendation would be in this respect that the synthetic be substituted or mixed with the natural floral oil depending upon the material for which it is to be used. For example, we would say that jasmin for perfume should require about 75 per cent. of the natural oil and 25 per cent. of the synthetic, depending, of course, upon the quality of the synthetic used. In the case of toilet water, if a good synthetic is available, we would recommend 50 per cent. synthetic and 50 per cent. floral oil in order to extend the amount of jasmin available. In the case of talcum powders, face powders and creams the synthetic can be substituted almost entirely or 10 per cent. of the natural oil can be used and the floral oil substitution made to the synthetic.

There are several new synthetic jasmins on the market at present which the writer has seen and probably there are many more very fine ones which can also be used in the above replacements. For example, Jasmin Absolute Synthetic of von Ameringen-Haebler, and Jasmin No. 231 of Firmenich & Co., Pomade Simile Jasmin of Ungerer, Jasmin Fleur "V" of Verley and Jasolea of Fritzsche Brothers.

We believe there is no doubt that the extreme demand for a good substitute for the natural product will stimulate the reproduction of not only new and interesting synthetic jasmin floral oils but also unusual aromatic chemicals which will find an added use in our industry.

PHENYL ETHYL ALCOHOL

Phenyl ethyl alcohol is one of those aromatics which were first produced synthetically and only later actually detected in essential oils. As far back as 1876, B. R. Radziscewski referred to the synthesis of normal phenyl ethyl alcohol, which he obtained through reduction with sodium amalgam from phenyl acetic aldehyde. Its use did not achieve any importance, however, until after its presence had been determined in rose water and rose oil.

Although phenyl ethyl alcohol is one of the principal constituents of rose water, only a small quantity of it is contained in genuine otto of rose. Rose water oil, however, contains as much as 35%, while floral extracts with volatile solvents also contain a considerable percentage of this alcohol. These circumstances explain the differences in odor between otto of rose, rose extracts and rose water, as the phenyl ethyl alcohol being water-soluble will for the most part remain in the distillation water during distillation.

It is natural that the quality and purity of synthetic phenyl ethyl alcohol such as is generally used in the production of rose perfumes is of greatest importance. Apart from the customary checks on the physical constants, the following simple method will be found useful in determining its odoriferous quality. Apply one or two drops of phenyl ethyl alcohol to the palm of the hand, rub in well and examine the odor carefully. The phenyl ethyl alcohol which is not of the highest quality will produce a faint odor of acetic acid, phenol or hyacinth. Upon prolonged storage, particularly in insufficiently closed containers, phenyl ethyl alcohol will partly oxidize and form phenyl acetic aldehyde.

Inasmuch as phenyl ethyl alcohol does not irritate the skin, contrary to phenyl acetic aldehyde, it can readily be used for perfuming cosmetic preparations, and it has the further advantage of not discoloring in the presence of alkalis, for which reason it is often used in perfuming white toilet soaps. It is, of course, also an important constituent of most floral perfumes and floral bouquets as well as of many fancy compositions. In nature this alcohol occurs not only in otto of rose, but especially in oil neroli, champaca oil and geranium oil.

Not only the alcohol itself but also the esters of phenyl ethyl alcohol are of importance for the perfumer as they, too, show a rose character which is, however, decidedly different from that of the alcohol. Very interesting results are achieved with the use of phenyl ethyl phenyl acetate which is characterized by its delicate odor reminiscent of hyacinth and roses and which possesses in addition a noticeable fixing quality. *Schimmel Briefs, Jan. 1941.*

INSULIN SUBSTITUTES

Luntz summarizes present day knowledge of insulin substitutes. All of these aim at curing or alleviating diabetes by oral administration. However, no remedy replacing insulin for pancreatic dysfunction has yet been found. The use of substitutes not only delays initiation of proper medication but invites the progress of the disease to a dangerous stage. Improvement attributed to the oral use of substitutes is, in reality, due to the strict regimen imposed on the patient, as various investigations have shown. Substances employed as substitutes or experimented with include guanidine derivatives, succinic acid, a decoction of the kadal ranji root, a hypoglycemic extract of the roots of the "devil's club," duodenal extracts, vegetable protein preparations, protein injections and cabbage extracts. Guanidine derivatives are synthetic compounds with an effect resembling that of insulin. Used on the continent they have been found by British investigators to be impracticable and even dangerous. A continental product (synthalin), a decamethylene diguanidine hydrochloride and reported to lower blood sugar, did in some cases lower ketosis in the urine but also exhibited toxic properties by inducing gastrointestinal disturbances in many patients and jaundice and hepatitis in others. Synthalin is a harmful drug, as it lowers the blood sugar not by promoting increased oxidation of dextrose but by a toxic effect on the liver. Neosynthalin, containing fourteen methylene groups, appears to be less toxic and perhaps not so active as the original product. Succinic acid, orally administered for the control of diabetic ketosis, in the hands of English and Scotch analysts either gave negative results or failed to prevent the onset of diabetic coma or to diminish chronic diabetic ketonuria. Gyorgyi, its author, proceeded on the assumption that the C_4 carboxylic acids, especially pyruvic acid, played a vital part in intermediate carbohydrate metabolism and that ketosis represented a dysfunction of these acids and could be prevented by succinic acid acting as a catalyzer. The kadal ranji root decoction popularly used by Indians for diabetes, renders the urine of diabetic subjects sugar free by raising the renal threshold for the excretion of sugar. It is considered dangerous by its author. Investigations of the hypoglycemic substance inherent in the extracts from the devil's club root (Fatasia horrida) and ostensibly nontoxic is being further investigated. Duodenal extracts, first used in 1939, failed to give uniform clinical results. The extract varied in different cases, not in relation to the actual severity of the case, but rather to the duration of the disease. A diminution of hyperglycemia, glycosuria and diuresis and an increase in weight were noted. A vegetable protein preparation derived from the germ of the carob or locust bean (Ceratonia siliqua) and tried out on diabetic children yielded inconclusive results. Protein injections prepared by G. Singer merit further consideration, though his view that they form the basic treatment of diabetes cannot be accepted. The mechanism of action is by no means clearly understood. The effect on diabetes may be due to their power of modifying metabolism. Experiments with cabbage extracts on blood sugar concentration, with which MacDonald and Wislicki experimented on animals, chiefly rabbits, to discover a preparation devoid of toxic effects, yielded them both a hyperglycemic and a hypoglycemic fraction. The latter was effective orally as well as when injected and no hypoglycemic convulsions were evoked. In a depancreatized dog which had been kept alive by injections of insulin, blood sugar and glycosuria were controlled by the sole use of this extract and insulin could be withdrawn entirely. A two day interval between withdrawal of the cabbage extract and resumption of insulin therapy was marked by an abrupt rise in the concentration of dextrose in the blood and urine. According to Luntz the specificity of insulin in the successful management of diabetes should constantly be emphasized against the proponents of all irrational medicines and therapies until a better remedy has been found. Synthetic products so far evolved cannot compare with insulin in efficacy and are of little if any use in the practical treatment of diabetes. The ultimate conquest of diabetes may depend on a more thorough understanding of carbohydrate metabolism. That implies a better understanding of the anterior pituitary, the adrenal cortex and various other active agents in the body. *Guy's Hosp. Gaz. vol. 54, p. 285.*

GENTIAN VIOLET FOR PINWORM

Miller and his collaborators used gentian violet tablets in the treatment of 29 school children, from 6 to 13 years of age, positive for pinworms by the National Institute of Health anal swab technic. The gentian violet was administered in ½ grain (0.03 Gm.) and 3/20 grain (0.01 Gm.) tablets. The disintegration of the tablets used was supposed to occur four hours after they were swallowed, thus providing the largest concentration of the drug at the site of the infection. Treatment was continued for ten consecutive days. Children from 6 to 9 years of age were given two 3/20 grain tablets three times a day before each meal and children from 10 to 13 years of age were given one ½ grain tablet three times a day before each meal. One week following the completion of the treatment an anal swab was made on each patient and two others at weekly intervals. Of the 29 children who took the prescribed dosage and had three post-treatment swabs, only 3 were found still positive following treatment. The effects of gentian violet could be studied on 31 patients taking the entire prescribed dosage. Of these, 23 reported no ill effects, 2 reported slight abdominal pain, 3 slight nausea lasting only one day, 1 anorexia lasting one day, 1 anorexia lasting for several days and 1 colicky pains with nausea. No child in the age group tested and taking the prescribed dosage vomited. However, 2 children (1 and 8 years old was inadvertently given the higher dosage and the other child's dosage was halved) vomited and had anorexia. Both of these children were underweight and had poor appetites, and the smaller child was extremely nervous. The symptoms were usually so mild that treatment was not interrupted with the exception of 4 patients whose symptoms disappeared and did not return with the resumption of treatment. *Journ. Can. Med. Assoc. vol. 21, p. 455.*

VITAMINS AND PSORIASIS

Vitamin D Preparations for Psoriasis.—Thacker used viosterol, crystalline vitamin D, a mixture of western fish oils, a special concentrated cod liver oil in capsules and a stock concentrated cod liver oil internally for the treatment of twelve persons afflicted with psoriasis. Concentrated cod liver oil in a vanishing cream base was applied to the psoriatic areas. The lesions of nine patients disappeared following treatment with the stock concentrated cod liver oil and the special concentrated cod liver oil in capsules. Two patients failed to respond to this therapy and the condition of one was slightly improved. The first five persons treated have been free from psoriasis since treatment was terminated about one year ago. Psoriatic lesions failed to regress after the administration of seven or eight times as much vitamin D in the form of viosterol and crystalline vitamin D as that of the concentrated cod liver oil. The areas of psoriasis also failed to respond to the mixture of western fish oils. Therefore it appears that cod liver oil contains an unidentified antipsoriatic factor in a greater quantity than is present in the other preparations used. The sequence in the disappearance of the lesions is a profuse coarse scaling which occurs generally within three weeks after treatment is begun followed by thinning, fading of the redness of the base and a fine branlike scaling. After the lesions are gone the formerly involved areas are not to be distinguished from uninvolved areas. Local application of concentrated cod liver oil had no effect on the disorder. Psoriasis is probably due to a metabolic disturbance, the nature of which is yet to be determined. *Ill. Med. J. vol. 78, p. 352.*

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Ersner states that in more than 500 cases of obesity amphetamine sulfate has proved to be the "drug of choice" in obtaining excellent results. No serious complications were encountered. Only obese patients who gave a history of overeating were selected for treatment. After a physical examination the patient was put on a diet of from 1,200 and 1,500 calories daily. This diet consisted of dry cereals, skimmed milk, tea or coffee (without sugar or cream) fresh and stewed fruits, raw and cooked vegetables, one slice of bread with each meal and the choice of from 6 to 8 ounces of meat, fish, chicken, cottage cheese or two eggs daily. The patient was cautioned to limit the intake of fluid and to make certain of a daily evacuation. The patient was given the first week's medication (the smallest possible dose) and thereafter returned every week for a check-up and further medication. The drug was withdrawn at the end of every month or the loss of the first 20 pounds (9 Kg.) and subsequent 15 pounds (6.7 Kg.), and for the ensuing week some brand of vitamin B, C and G was prescribed to make up for any deficiency in the diet caused by the patient's carelessness. After each of these vitamin periods the previous week's dosage was again prescribed and then increased the following week. This permitted the final strength of the drug, one 10 mg. tablet after each meal, to be reached in about three months. The amount of weight to be lost at any one course of treatment was never to be more than one fifth or one-sixth of the patient's greatest weight. If the new final weight was far from the nearest calculated normal chart weight (according to height and age), the patient was instructed to return in from four to six months, when again this procedure would be repeated. Thus no patient in the series showed any untoward effects from the loss of weight, even though as much as 60 pounds (27 Kg.) was lost by one patient in the course of three months. The average weight lost for the first week amounted to 5 pounds (2.3 Kg.). The average loss for a course of treatment (from three to twelve weeks) was 3⅕ pounds (1.4 Kg.) per week. With the exception of the vitamin week there were but few occasions when a continuous and sustained loss of weight was not obtained; 100 per cent. cooperation was requested. Invariably most of the patients would voluntarily say that they were feeling much better or had much more pep. All agreed that the loss of appetite made dieting easy. With the small graduated doses of amphetamine sulfate employed, the systolic and the diastolic readings, when hypertension was present, usually dropped to normal. Whether this drop toward normal was directly due to the action of the drug or to the loss of weight is a question. Several instances of hypotension became normal during the course of treatment. Normal blood pressures were not affected or were slightly, if at all, lowered. There was but little change in the metabolic rate during the course of treatment. A marked progressive improvement in urines containing albumin, sugar and hyaline and granular casts was observed, indicating that amphetamine sulfate produces no injurious renal effects. There was little evidence of true addiction. In most instances the medication caused a mild constipation, which was easily remedied with a mild laxative or a simple lubricant, as liquid petrolatum. The reported untoward reactions of the drug should be of much significance to the dispenser and the novice who is about to prescribe it. The patient must be educated as to the possibility of its allergic reactions and of its cumulative effects. Self medication and overdosing must be eliminated to prevent any future fatalities. *Endocrinology, vol. 27, p. 776.*

SULFATHIAZOLE THERAPY

Pulver found sulfathiazole effective in epidemic cerebrospinal meningitis. Of 26 patients treated solely with this drug (their age level ranged between 1 and 61 years [19 under 16 years]), all recovered save 2, thus yielding a mortality rate of 6.9 per cent. compared with a 50 per cent. death rate previously noted during a ten year period. Cerebrospinal fluid tests disclosed Neisseria meningitidis in 23 of the cases and its subsequent disappearance within three to seven days after medication. (Nasal and pharyngeal smears had detected the microorganism in only 2 cases.) Blood tests showed in individual cases a decrease in the leukocyte count from 24,800 and 30,200 to 5,800 and 6,700 leukocytes respectively within two days. Biochemical analyses made at regular intervals disclosed a rapid return to normal levels in the sugar, total albumin and chloride content of the blood. The author's experiments in reducing dosage to the lowest quantities compatible with therapeutic effects were finally stabilized at from 12 to 20 Gm. within four to seven days, but allowing for increased dosage in complications. Initial doses in adults of from 1 to 2 Gm. and in children of from 0.1 to 0.15 Gm. per kilogram of body weight and totaling from 6 to 8 Gm. within twenty-four hours were reduced after defervescence to one-third and one-half of the original dosage. In the majority of cases these quantities of the drug were able to lower fever of 100.4 to 104 F. to subfebrile or normal conditions within twenty-four to forty-eight hours. In order to prevent reactivation the drug was continued for several weeks more. Among the significant effects reported by the author is the observation that some of the children and adults brought to the clinic in a semi or total state of unconsciousness in the morning were able to play in their beds or read the newspaper in the evening. How-

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ever, headache and cervical rigidity tended to linger for from two to ten days. The drug was administered intramuscularly, in exceptional cases intravenously with dextrose, and caused no local inflammation. Its superior atoxicity was seen in the absence of such secondary effects as granulocytopenia, hemolysis, hepatic lesions, renal irritation and grave cyanosis. A stubborn case of granulocytopenia in a boy aged 8 years with final recovery and a case of neuritis with metastatic acute arthritis of the knee joints are cited by the author as the only evidence of toxic damage produced by the drug. No intraspinal injection was practiced. The drug was found efficacious even in cases of seriously delayed medication.

Miescher reports the cure of 14 out of 15 male patients, mostly with uncomplicated gonorrhea, by means of a single peroral dose of sulfathiazole. The massive dose, varying between four and ten tablets of the drug (tablet 0.5 Gm.), was either mixed with sugar and placed on the tongue in powdered form or dissolved in water and ingested in 0.5 liter of a native tea. No untoward effects nor relapses were observed. The single dose therapy represents an experimental evolution first from favorable results obtained by combining local and intramuscular vaccines with sulfathiazole for the cure of acute and chronic gonorrhea and then from the exclusive use of sulfathiazole spread over a progressively diminishing period of time. In these experiments the author had observed a reduction in gonococcus count and in gonorrheal discharge usually twenty-four hours, frequently also even twelve hours after medication. Single doses of ten tablets (5 Gm.) are regarded by him as approximating highest levels of tolerance. *Schweiz. med. Woch. vol. 70, p. 887,891.*

DENTAL ANESTHETICS

In a study made of local anesthetic agents used in dentistry, Dr. C. W. Freeman, writing in the Journal of the American Dental Association, makes the following observations:

The salts of procaine are the most satisfactory local anesthetic agents available at present; it is desirable to use a solution with a pH as near that of the blood as is practical; freshly prepared solutions in distilled water of 2 per cent. procaine borate or 2 per cent. procaine hydrochloride alone with 0.1 per cent. sodium carbonate are satisfactory. A vasoconstrictor, in as low a concentration as is practical, increase the efficiency. A solution may safely be hypotonic, but hypertonicity is undesirable. The buffering action of tissues and their ability to recover from injury has made it possible to use solutions far from satisfactory without very serious consequences.

TREATING BOILS

Beling and Abel used sulfamethylthiazole in 25 and sulfathiazole in 15 consecutive cases of staphylococcic infections; 13 of the cases were carbuncles, 12 furuncles and 15 abscesses. Staphylococci were cultured from the lesions of each patient and were recovered from the blood stream of 1. Thirty-eight of the patients were definitely improved after receiving a considerable quantity of the drug; one result was questionable because of the prolonged course of the disease and concomitant administration of staphylococcus vaccine. Furuncles were affected most readily and disappeared within four days, except in two instances; one had about ten furuncles and responded satisfactorily although eight days elapsed before the last one disappeared and the other patient, the one who had received the vaccine, was not definitely improved. Response to thiazole therapy depends in part on the developmental stage of the lesion when the drug is commenced. The earlier furuncles responded about 25 per cent. more slowly than well developed lesions but receded without formation of pus. The latter quickly soften, discharge their contents promptly and heal. No core forms and the discharge is liquid. The induration and redness around the lesion disappear rapidly. Carbuncles responded more slowly because of the extensive nature of the lesion but did so with relative rapidity and in essentially the same manner. The surrounding infiltrated areas became soft and the redness disappeared, while the drainage assumed the character described for furuncles. Any cores formed prior to treatment were soft and easily dislodged. Diabetes mellitus is not a contraindication to treatment. It may prolong the time required for the lesion to improve, but this is not always true as the carbuncle of one such patient responded in six days. If it is deemed necessary to excise a carbuncle, the authors advise giving sulfathiazole for twenty-four hours prior to excision, as they believe that this will tend to prevent spread of infection, the development of septicemia and residual local infection. Abscesses usually responded to treatment in from five to eight days, depending on their stage before treatment and on the presence of cellulitis. The authors state that, if staphylococcic cellulitis is treated before there is any tendency to localization, resolution may take place without formation of pus. If pus does form, the abscess will be insignificant. When an abscess has already begun to form, the time taken to clear up the cellulitis and the abscess together is usually several days longer. One case with cellulitis and abscesses cleared in twelve days, one with multiple intractable abscesses throughout both breasts cleared up within five days and in another case there was no effect from sulfamethylthiazole. In the last mentioned case there were honeycombed abscesses throughout the scalp and subaponeurotic region following an injury to the scalp and extensive cellulitis; also diabetes was present. Chemotherapy alone is not sufficient treatment for abscesses or any other collection of pus that is accessible. These various lesions should be handled in the customary manner with the addition of thiazole medication by a suitable route. *Am. J. Surgery, vol. 50, p. 258.*

SULFAPYRIDINE EFFECTS

Hegglin reports the secondary effects observed in connection with the use of sulfapyridine in more than 450 cases of pneumococcic, meningococcic and gonococcic infections, with granulocytopenia (1 case, terminating fatally) and grave hematuria (5 cases) ranking as the worst effects. Nausea, vomiting, hematoporphyria, mild anemia, cyanosis and cutaneous manifestations (3 per cent.) were observed almost regularly. Latent and slowly developing granulocytopenia manifested itself suddenly in a patient with unilateral pneumonia, with high fever, though the drug had been discontinued for some time and the patient felt completely well. Renal lesions were disclosed in grave hematuria, in one case evolving into anuria, with increased residual nitrogen. Hematuria often presented a clinical picture of a pronounced renal colic due to calculus, an intense pain extending from one or both kidneys into the testicles and involving only a mechanical lesion, leaving the glomeruli unaffected. Copious water ingestion, regarded by the author as a necessary therapeutic adjuvant in renal stone due to the drug, released large quantities of gravel, acetylsulfapyridine forming the chief constituent. The author believes that, though grave secondary effects cannot be avoided because of the relatively high doses required for treating pneumonic infection, sulfapyridine has proved its chemotherapeutic value. However, the possibility of untoward effects should constantly be borne in mind in order that appropriate counteractive measures may be duly employed. Secondary effects of a nonserious nature, such as nausea and vomiting, may acquire so pronounced an intensity as to necessitate discontinuation of the drug and thus jeopardize the patient's chances of recovery. Granulocytopenia induced by sulfapyridine is not necessarily fatal. An erroneous diagnosis would see in the clinical picture a reactivation of the infection and resume the use of the drug, whereas, in reality, blood analysis would show that damage had been done to the bone marrow. Hematuria ought not to be lightly regarded, as it may lead to anuria. When anuria has set in, cystoscopy is urgently indicated. Sulfapyridine, though parenterally given, was found excreted in the gastric juice, in one case with a 30 per cent. concentration. No injurious secondary effects were noted on the nervous system. *Schweiz. med. Woch., vol. 70, p. 881.*

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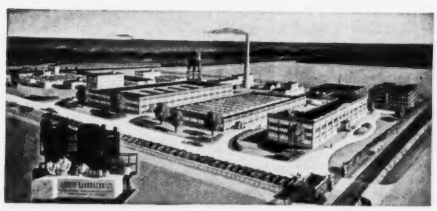

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New Jersey Zinc

U.S.P. ZINC OXIDE

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READERS'

ATHLETES FOOT: From Charles A. Gillespie of Villa Park, Illinois we get the following recommendation for treatment for athletes foot.

Basic fuchsine (saturated solution)	*10.0*
Phenol (5% solution)	*100.0*
Boric acid	*1.0*
Acetone	*5.0*
Resorcinol	*10.0*

The phenol and fuchsine solutions are mixed, filtered, and the boric acid added. After two hours add the acetone and then after a further two hours add the resorcinol.

SULFUR: We are considering adding a sulfur cream and hair coloring to our line. Could you advise which are the best forms of sulfur to be used in each instance? New York City.

Colloidal sulfur is the best form for use in drugs and cosmetics; as a matter of fact, other forms are almost useless. Sulfur in colloidal form is very finely divided so that it has very great surface. Since the reactivity of sulfur particles depend upon their surface this form is obviously most reactive in combining with hair dye components and also in giving physiological effects.

CALAMINE: We occasionally see calamine recommended for use in cosmetics, especially in facial masks and we are curious to know what its special virtues are. Will you kindly tell us what calamine is and how it may be used for special purposes? St. Petersburg.

Calamine at one time was a natural zinc silicate with a pink color that made it somewhat more suitable than white powders for use in various types of lotions and ointments applied to the skin surface. At present, however, practically all calamine consists of pure zinc oxide mixed with from one to two per cent. of a red earth color to make it pink. Under these conditions, calamine has all the virtues of zinc oxide plus the additional advantage of a color that does not prevent blending with the natural skin color. The same result is very easily obtained, however, by the use of zinc oxide and the proper combination of approved colors to give shade that is pleasing. Zinc oxide itself is beneficial in masks because it does have some astringent and possibly some antiseptic value.

LIQUID CLEANSER: I am wondering if you could give me any helpful information in regards to an oil which could be used as a liquid cleanser, something which could be used as a Cocktail facial. Any suggestions which you may offer will be appreciated. Self-addressed stamped envelope is enclosed. Houston.

We are not familiar with so-called cocktail facials but standard liquid cleansers contain mineral oil, light grade, as the active cleanser. It is possible to use just a mineral oil itself for cleansing purposes but it is not pleasant to use and difficult to remove completely from the face. The best formulation for a product of this type is similar to a hand lotion with a relatively large amount of oil.

Mineral oil	15.0
Oleic acid	5.0
Amino glycol	1.0
Water	79.0

The mineral oil and oleic acid are mixed together and the amino glycol, described in an article in the current issue of this magazine, dissolved in water is mixed with the oil mixture. The lotion may be stabilized if necessary, by replacing half of the water with a one per cent. solution of gum tragacanth, in which case preservative must be present.

FOAM BATH: Can you help me out in the following problem? I have tried many different bath salt formulas, both plain and effervescent, in an attempt to duplicate a product on the market that seems to be quite popular. This bath powder produces many bubbles without the use of soap at all; the powder being dropped into water and water from the faucet running onto it in a heavy stream. My effervescent salts simply fizzle for a moment and then subside without leaving the heavy lather I want. It is my guess that these bubble products contain compounds such as saponin or sodium lauryl sulfate and I wonder if their use has been patented in this connection. Newark.

Your guess is just about one hundred per cent. correct. The foam or bubble bath powder you describe consists of from five to twenty-five per cent. of saponin or sodium lauryl sulfate, the rest being sodium sulfate or sodium sulfate plus carbonate to soften the water. Although these products are quite popular, only psychological value can be claimed for them, since there is no reason to believe that they have any cleansing or skin softening power. In addition, the foam disappears immediately when soap is put into the bath water.

QUESTIONS

PINE OIL: Possibly you can give me some assistance in the manufacture of my pine bath liquid, consisting of gum tragacanth, glycerin, Siberian pine needle oil and water. The product after standing from one day to two weeks begins to separate either into two layers or into curds. We would like to make a stable homogeneous solution and would appreciate your assistance in doing this. In addition, the green color that we use in the mixture fades completely on exposure to light and we would like to know how to obtain a faster green shade. Albuquerque.

Your pine bath is different from any we have ever seen and there is no reason at all why it should stay together. A pure Siberian pine needle oil is not soluble in water and not very well emulsified by your procedure, so that any homogeneous solution you first get is wholly accidental. Your solution contains about 8 per cent. of the pine oil. The oil either can be dissolved in sulfonated castor oil which is then diluted with water to make the finished pine bath liquid, or enough alcohol may be mixed into your present formula to keep the pine oil in solution. At the same time, however, too much alcohol must be avoided to prevent precipitation of the tragacanth. For a sulfonated oil formula mix eight parts of pine needle oil with 50 parts sulfonated castor oil and then add 42 parts of water, with or without the addition of one-half part of gum tragacanth. Or another alternative, omit section two of your formula and dissolve your pine needle oil in section three in 20 parts of diethylene glycol ethyl ether, adding 80 parts of water to section four. As regards the fading of your dye in the light your supplier should be able to give you a dye which is faster to light than the one you now use. Some dyes, because of their brilliance, are extensively used in products that do not have to be exposed to light and their lack of light fastness is no disadvantage.

HAIR CONDITIONING CREAM: We would greatly appreciate your sending us a formula for the manufacture of a conditioning cream for the treatment of dull, dry, brittle or lusterless hair. We are also interested in a reconditioning cream for the treatment of abused hair caused from over-bleaching or over-processing in permanent waving. Toronto.

We believe the best type of product for reconditioning dry hair is similar to a cold cream in its general formulation but with the addition of a fair proportion of vegetable oil and some lanolin.

Beeswax	10.0
Petrolatum	15.0
Lanolin	4.0
Olive oil	35.0
Borax	1.0
Water	35.0

The first four ingredients are melted in one container and the borax dissolved in the water in another vessel. Both solutions are heated to the same temperature about 60°C. (140°F.) and then thoroughly mixed, stirring until cold. This cream is rubbed into the hair and as much excess as possible removed with a dry towel. The formula may be modified to change the consistency somewhat and ought to be quite effective not only in counteracting dryness of the hair but also in adding to its luster.

HAIRDRESSING POMADE: We are interested in a hairdressing pomade that can be used as an "anti-kink" preparation. Louisville.

Ordinary petrolatum is probably as good as any ointment mixture available. If you find that this is not effective in dressing particularly stubborn hair, then a certain amount of ozokerite may be added to make a stiffer mixture.

WATER SOLUBLE ESSENTIAL OILS: Please advise how we can render oil of spearmint and oil of peppermint water-soluble. Chicago.

Essential oils may not easily be made water-soluble since they are in themselves so very insoluble. However, by the use of the proper technique along with the right soap it is possible to make them completely soluble. The finished product should be a slightly viscous, clear amber liquid, which may be diluted with water to any extent without losing its transparency. The essential oil must be mixed very thoroughly with the soap solution and it is important that not the slightest trace of essential oil should escape this process. Otherwise, the solution will not be clear when diluted. Probably the most satisfactory soap would be a saturated aqueous solution of potassium oleate. This is made in the following way. Oleic acid (17.0 grams), and potassium hydroxide (3.8 grams dissolved in 80 cc. of water) are both heated to 100° C., mixed by gentle shaking, cooled, and water added to make 100 cc. More oleic acid or alkali should be added until the sample gives a faint pink color with phenolphthalein, vanishing on the addition of an equal amount of alcohol.

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an excerpt from an Open Letter

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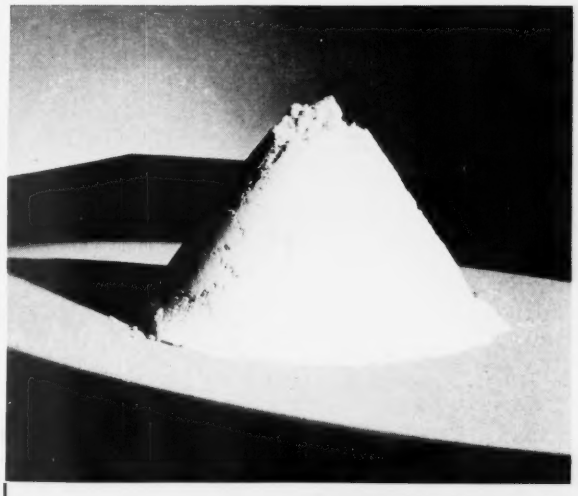

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DECEMBER MOVEMENTS

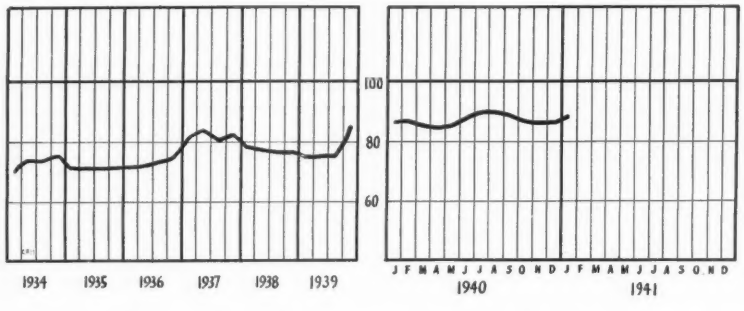
Up

Aloes, Curacao 8c
Apricot Kernel Oil 4c
Belladonna Leaves 15c
Birch Tar Oil 25c
Bois de Rose, Brazilian 15c
Buckthorn Bark 5c
Burdock Root 5c
Cananga Oil, Native 35c
Rectified 50c
Caraway Oil 50c
Cascara Sagrada 1c
Cedar Leaf Oil 5c
Cedar Wood Oil 2c
Celery Oil 50c
Chamomile Flowers, Hung. 25c
Civet $9.
Cream Tartar 2c
Gentian Root 12c
Geranium Oil, African 50c
Lavender Oil, Spike 20c
Malva Flowers, blue 5c
Menthol, Chinese 10c
Mullein Leaves 3c
Musk Zylene 10c
Nux Vomica Buttons 1c
Peppermint Oil, Nat. 5c
Redist. 10c
Psyllium Seed, French 10c
Quince Seed, Persian 40c
Spanish 25c
Rochelle Salt 2c
Rosemary Oil 4c
Rue Oil $1.25
Sage Oil, Dalmatian $1.00
Sarsaparilla Root, Mex. 1c
Seidlitz Mixture 1½c
Senega Root 2c
Spearmint Oil 10c
Tartaric Acid 3c
Terpineol 4c
Vanilla Beans, Bourbon 50c

Down

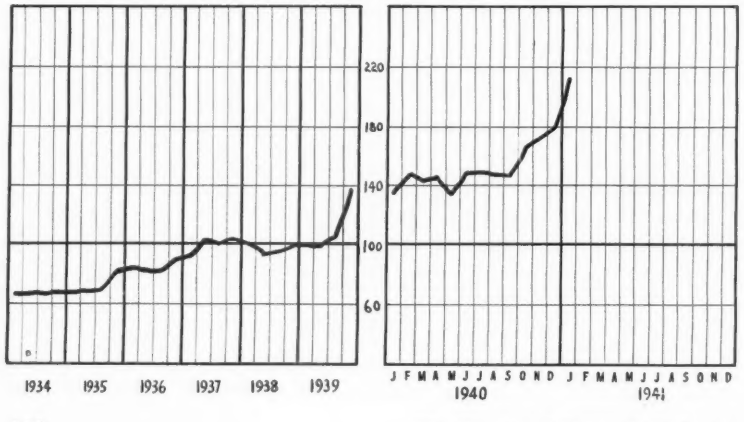
Agar No. 1 5c
Anise Oil 20c
Balsam Peru 5c
Cassia Oil, Redist. 5c
Ephedrine, Alkaloid 20c
Hydrochloride 10c
Sulfate 8c
Golden Seal Root 10c
Helonias Root 2c
Ipecac Root 5c
Kamala 4c
Lycopodium $1.50
Mace Oil, Dist. 10c
Myrrh Gum 3c
Nutmeg Oil 10c
Rhubarb Root HD 8c
Saffron Valencia $6.50
Thymol 5c
Valerian Root 15c
Wormseed Oil 60c

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



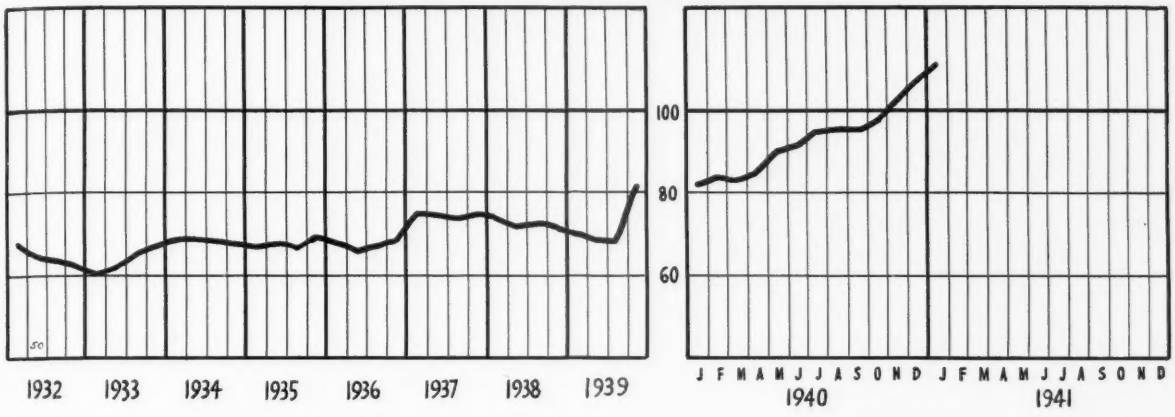
The cosmetic raw materials index also advanced during the period under review to 88.5 from the previous 86.9. White bleached beeswax was offered at 36½ cents; quince seed advanced from 85 cents to $1.10; spermaceti wax was higher by 3 cents to be quoted at 25 cents; stearic acid was 12½ cents from the previous 11¾ cents; tragacanth gum was up 25 cents a pound to $3.50. The only decline note in this group of materials was balsam Peru, now offered at 70 cents and previously at 75 cents.

15 Botanicals—Weighted Price Index. 1926 = 100.



The botanicals index showed another sharp advance during the period from 179.2 to 211.3. Aloes was up 8 cents to 53 cents; belladonna 15 cents to $2.; Cascara 1 cent to 16 cents; Gentian root 22 cents to 50 cents; licorice 12 cents to 50 cents; nux vomica 1 cent to 6 cents; orris root 15 cents to 75 cents. Agar agar declined 5 cents to $1.45 and rhubarb root was 8 cents lower at 40 cents.

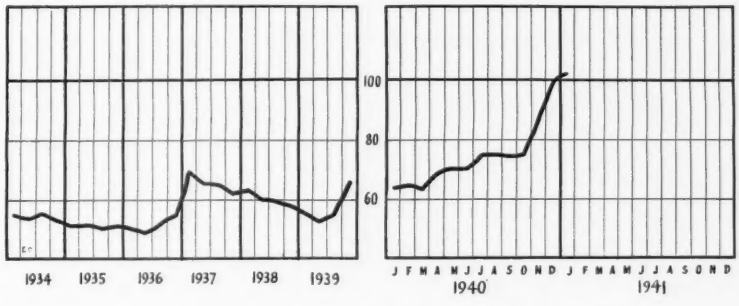
50 Raw Materials—Weighted Price Index. 1926 = 100.



The price index of fifty commodities for January 1941 increased to 111.7 compared with 107.5 in the preceding month. With half the world at war, and the other half inclined that way, the tendency of all raw materials was to advance in price. The gigantic expenditures for American rearmament will undoubtedly have a stimulating effect on business in general. This development will come at a time when stocks of many imported materials are at low ebb and when, in many instances, they are not replaceable.

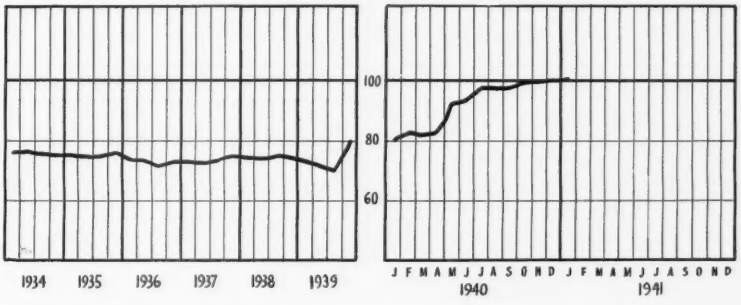
15 Essential Oils—Weighted Price Index. 1926 = 100.

The essential oil index was up to 102.6 from the previous 99.9. Bois de Rose advanced 25 cents to $1.95; cananga 35 cents to $2.60; Cassia 5 cents to $1.55; geranium 50 cents to $12.75; lavender 50 cents to $5. and peppermint 5 cents to $2.85. The only oil in the index group to decline was anise from $1 to 80 cents. Strength in all respects was the predominent note in the essential oil and aromatic chemical markets.



15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.

Medicinal chemicals index advanced to 100.1 from the previous 99.7. Barbital was up 25 cents to $3.50 and cream of tartar, at the time the charts were calculated, advanced from 36¾ cents to 38¾ cents. However, during late trading, all tartrates were further advanced as follows: cream of tartar 43 cents; rochelle salt 32 cents; seidlitz mixture 26 cents; tartaric acid 52 cents; tartar emetic 40 cents. Mercury was down 5 dollars to $163. a flask.



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GLYCERINE

Glycerine is a fine example of how the American chemical industry has achieved stability in certain raw materials. Primarily a by-product in the manufacture of soap, World War I saw the price of glycerine go as high as 70c a pound. Producers here have so successfully controlled the situation during the present conflict that there have been no price advances and this materially is currently selling at the very favorable level of about 12c to 13c a pound.

While it is true that glycerine is not now so basically necessary in the manufacture of munitions as has heretofore been the case, other industrial uses are widespread and there is a steady demand which, if producers had not taken steps to prevent sharp fluctuations, would have before now affected the market. Export demand has been heavy, but has been placed under control to the extent that the requirements of American industry are given first consideration.

The director of research for the Shell Development Co., Dr. E. C. Williams, outlined before the convention of the American Institute of Chemical Engineers at New Orleans, a new and commercially practical manner of producing glycerine synthetically from petroleum.

Williams announced that his company is already operating a semi-commercial plant at Emeryville, California, for making synthetic glycerine. How soon Shell might build a large plant was not disclosed, but it was indicated that when the present supply of glycerine becomes insufficient, the new source would be tapped.

MERCURY

A development of interest in the fine chemical market was a further decline in the domestic price of mercury. The current range is $163. a flask.

Domestic mercury production in October equaled the high rate of 3600 flasks attained in September, according to the U. S. Bureau of Mines. The 2700 flask consumption was the highest reported since October, 1939, when about 3100 flasks were used, and 600 flasks over the quantity reported for September.

Exports of 757 flasks were slightly below the September total of 799 flasks, and imports continued to be nonexistent. Consumers', dealers', and producers' stocks at the end of the month totaled about 14,100 flasks, compared with 13,500 at the end of September. Stocks in hand were equivalent to five months' requirements at the October rate of use.

According to reports, the Navy is calling for bids on approximately 140,000 pounds of mercury oxide. This order, it is said, will require approximately 1,400 to 1,800 flasks of mercury, and should prove a stabilizing influence on the market here. As previously stated, the government has decided to purchase mercury when the price reaches a predetermined level in order to prevent prices declining to a point where it would affect domestic production.

Foreign mercury is selling at exceptionally high prices. In some cases the disparity between the price of domestic and foreign goods is as much as $113. a flask. Recent reported heavy purchases of the metal by Germany from the European cartel, which is composed of the Italian and Spanish producers, have resulted in bringing the price up to $250. a flask f.o.b. European ports. This is equivalent to $280. a flask of 76 pounds duty paid.

With the foreign price of mercury at $250. a flask, not including freight, and American metal selling at $163. a flask, it is reasonable to expect that Great Britain will gradually turn to the United States for its supply. Normal consumption of mercury in Great Britain is estimated at about 30,000 flasks a year.

THYMOL IODIDE

United States production of the antiseptic, thymol iodide, was reported at 6,670 pounds valued at $20,000 in 1939, compared with 8,402 pounds at $27,919 in 1937, according to the Census of Manufactures. Synthetic thymol is made in the United States by one firm and imported from Germany. In 1937 imports of thymol amounted to 9,855 pounds worth $14,867; in 1938, 11,500 pounds at $17,999; and in 1939, 4,500 pounds at $7,045. No thymol has been imported in 1940.

BELLADONNA

Belladonna leaves continued very scarce on spot and the price tendency was again upward. From $2.00 to $2.05 a pound is being asked here. The seriousness of the situation can be more adequately appreciated when it is realized that during 1939 the high reached by this item was 23c a pound and not during the past 16 years has the price ever gone above 27c.

Requirements of belladonna in the United States during the past 10 years have been supplied very largely by importations from European countries, particularly Hungary, Italy, and Yugoslavia. Imports during the last decade have averaged 190,000 pounds annually. During the first 9 months of 1940, imports amounted to 129,100 pounds, valued at $20,700—somewhat below the average. In the first three-quarters of 1939, Hungary was the largest supplier with 33,300 pounds; followed by Yugoslavia, 27,200 pounds; Rumania, 26,900 pounds; and Italy, 23,800 pounds.

TARTRATES

A further sharp advance has carried tartrate prices to a record high level since the outbreak of the war in Europe. The advance amounted to 3c a pound for tartaric acid bringing the price for this chemical up to 46¾c a pound. Before the war started this article was available at 27¾c.

Tartrates go into the manufacture of a wide number of products including medicinal preparations, effervescent beverages, organic chemicals, bakery products and are also used as silvering and tanning agents.

The advance in cream of tartar amounting to 2c a pound establishes the market at 33¾c a pound. Rochelle salt and seidlitz mixture have been advanced to 28¾ and 23¼c a pound respectively.

New quotations on tartar emetic now range from 36¾c to 37c on technical material, and from 42c to 43c a pound for U. S. P., up 2c a pound. Higher costs and a growing shortage of crude material are responsible for the steady upward trend in the market.

This country is now producing crude material in an ever increasing volume and is importing additional supplies from several South American countries. It does not seem, however, that the new sources of crude material are as yet sufficiently established to offset the loss of imports from Europe, particularly Spain and Italy.

EPHEDRINE

Manufacturers of ephedrines announced a reduction of 15c an ounce on the alkaloid, 10c an ounce on hydrochloride and 12c an ounce on sulfate and now quote as follows: Ephedrine alkaloid U.S.P. in 100 ounce lots, 80c an ounce; Ephedrine hydrochloride U.S.P. cryst., 100 ounce lots, 65c an ounce; Ephedrine sulfate U.S.P. cryst. and powder, 100 ounce lots, 63c an ounce.

During the last 10 years imports of Ephedra vulgaris (ma huang) have ranged from a low of 500,000 pounds in 1931 to a high of 1,950,000 in 1935, declining again to 600,000 in 1939. Imports have come primarily from China.

For the first time statistics are available on the production of ephedrine in the United States; in 1939 production of ephedrine amounted to 403,237 ounces, valued at $593,778 at the factory, according to the Bureau of the Census. At one time ephedrine was obtained exclusively from the crude drug Ephedra vulgaris, but in 1939 the United States Tariff Commission listed two firms as manufacturing synthetic ephedrine. In addition to the imported Ephedra vulgaris, other species of the ephedra cultivated in southern California and the southwest can be used as a source of ephedrine.

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ALCOHOL

Reflecting general improvement in the position of the alcohol market as well as mounting replacement costs, prices on pure and industrial grades of alcohol have been advanced 1c a gallon on spot and future deliveries, extending over the first quarter of next year.

Quotations on alcohol have been consistently low, the trade states, and despite the latest upward movement alcohol values are still considerably low in regard to replacement costs of raw material. Synthetic alcohol has been a factor which manufacturers of the regular grades have had to take into consideration. It is said that distillers have had in mind a much sharper advance, but that the leading producer of the synthetic material has been recalcitrant, with the result that only a moderate advance was possible.

The advance of 1c a gallon establishes the market on solvent alcohol at 25½c in tank cars; 31½c in carlots; 33½c for 20 drums, and 36½c for 1 to 19 drums. The new schedule on specially denatured alcohol follows: tank cars, 24½c; carlots 30½c; 19 drums, 32½c; and 1 to 18 drums 35½c a gallon.

The production of ethyl alcohol and its use in denaturation established an all time high record during the 1940 fiscal year, announced Commissioner of Internal Revenue Guy T. Helvering. Production amounted to 243,727,756 proof gallons, or 20,000,000 in excess of the previous record year set in 1937.

The leading producing States were Pennsylvania, New Jersey, West Virginia, Louisiana, Indiana and Maryland, in the order named, and the various raw materials used were molasses, ethyl sulphate, corn and other grains.

Production of denatured alcohol experienced a large increase to 126,761,830 wine gallons, compared with 100,740,510 wine gallons in 1939 and 94,607,741 during 1938.

Of the total withdrawals of ethyl alcohol during the year, 24,344,306 proof gallons were withdrawn on payment of tax, and 227,476,422 proof gallons were withdrawn tax-free. Withdrawals of ethyl alcohol for denaturation, which amounted to 223,321,704 proof gallons, accounted for most of the tax-free withdrawals.

The largest withdrawals of ethyl alcohol for denaturation in any previous year occurred in 1926, when 191,670,107 proof gallons were withdrawn. The high point in tax-free withdrawals of ethyl alcohol, reached in 1940, was largely the result of the increased demand for specially denatured alcohol, which is an essential material in many industries.

The production of specially denatured alcohol for the fiscal year 1940 amounted to 111,409,797 wine gallons, which compares with the previous peak production of 83,561,077 wine gallons for the fiscal year 1939.

The amount of molasses used in the production of ethyl alcohol increased from 158,908,347 gallons in 1939 to 194,601,378 gallons in 1940, and the consumption of corn and other grains decreased from 180,469,145 pounds to 158,191,626 pounds. Relative production of alcohol from the various raw materials was as follows: From molasses, 68.6 per cent.; from ethyl sulphate, 25.1 per cent.; from grain 5.7 per cent.; from miscellaneous materials, 0.6 per cent.

QUININE

Since March, 1940, the United States has been purchasing quinine sulfate direct from the Netherlands Indies. Of total imports of quinine sulfate in the first 9 months of 1940, amounting to 2,364,300 ounces valued at $1,277,000, 1,748,000 ounces valued at $938,664 were imported direct from the Netherlands Indies and 616,000 ounces valued at $338,192, from the Netherlands. None has been received from the Netherlands since April. Total imports for the 3 quarters of the current year are considerably greater than for any year since 1923.

Imports of other alkaloids, salts, and derivatives of quinine and cinchona amounted to 821,800 ounces, valued at $373,900 during the first 9 months of 1940, of which 737,600 ounces, valued at $326,200, originated in the Netherlands and 62,500 ounces, valued at $46,400, in Netherlands Indies.

Prior to the outbreak of hostilities in Europe, practically all cinchona and products produced in the Netherlands Indies were distributed from the Netherlands.

WAXES

Candelilla wax is scarce on spot. Indications point to manipulation at the source with the result that some importers here find it difficult to do business direct with producers. The price range in New York is from 19c to 20c a pound. Candelilla wax comes from Mexico. Reports indicate that an increase in the prevailing export tax is likely.

Imported ceresin wax is high and scarce on spot. There is, however, dependable quantities of domestic material available from 11c a pound.

Japan wax is also reported as scarce in the spot market. Prices have tended upward in line with all Japanese commodities. Prices here ranged from 19c to 20c a pound.

Spermaceti wax is higher at from 25c to 26c a pound. There is, however, ample stocks of domestic material available.

GUM TRAGACANTH

The price of gum tragacanth has been abnormally high ever since the establishment of control of this commodity by the Persian Government. Conditions in the Near East have no aggravated the situation with the result that the spot market price range for number 1 gum is now from $3.50 to $3.75 a pound. Number 2 gum is quoted at a range of from $3.35 to $3.60 a pound as to quantity. It is needless to say that so long as conditions in the primary markets remain troubled there will be no lower prices on gum tragacanth.

Exports of gum tragacanth from Turkey amounted to 117,859 kilograms (260,000 pounds) valued at 201,635 Turkish pounds during the first 6 months of 1940, according to official statistics. Exports for the entire year of 1939 were 330,000 kilograms (725,000 pounds) valued at 318,000 Turkish pounds. In 1939, Russia, followed by the United States and Switzerland, Italy, and other European countries were the principal buyers. In the first half of 1940, imports of gum tragacanth from Turkey into the United States were at about the same rate 33,400 pounds, valued at $18,700 as in 1939.

COD LIVER OIL

About 200,000 gallons of cod liver oil will be produced this season in the eastern Maritime Provinces where some 15 extraction plants are located. A government biological laboratory is to provide basic information on the vitamin D potency (chick units) of domestic fish liver and body oils and to check the accuracy of vitamin guarantees made by vendors. In addition to policing activities, the laboratory will be concerned with Canadian supply and development of ample sources for poultry and other animal industries using fish oil products. This work is in cooperation with the Wartime Prices and Trade Board and the Dominion Department of Fisheries.

Early in 1940, refiners of medicinal cod liver oil in Newfoundland prepared for a production much larger than in recent years, according to the American Consulate, St. John's. At the beginning of the 1940 season considerable quantities were produced, but in August and September, for which months producers had anticipated their best yields, the fishing proved almost worthless, with the result that Newfoundland will not have a more than average production for the year. The fishing still continues, however, and it is hoped will augment production somewhat before the season closes.

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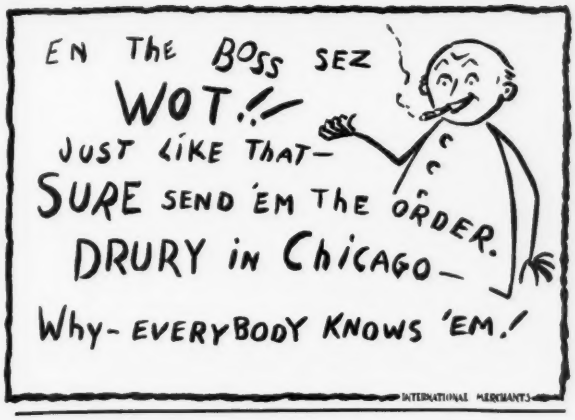

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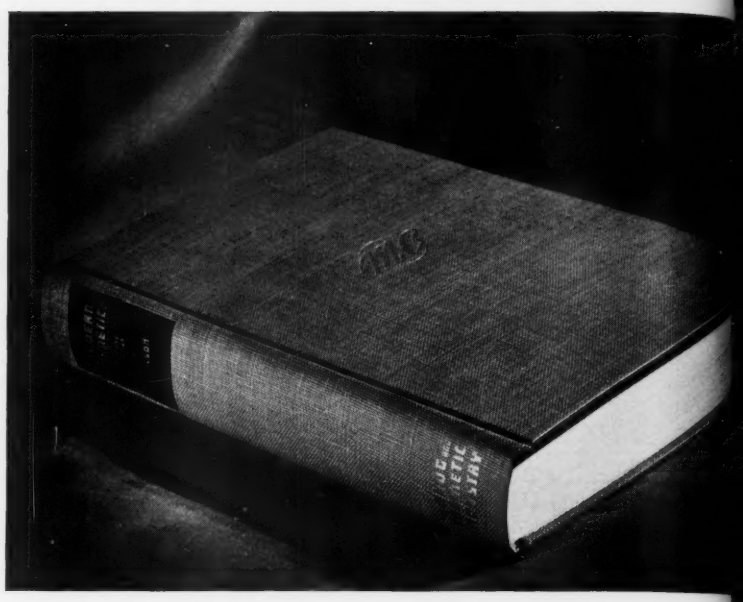

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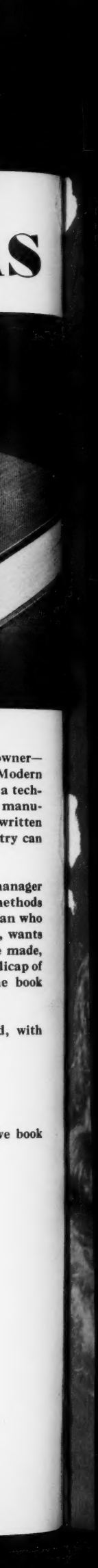
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